



# Economic and Revenue Forecast

Fiscal Year 2010  
Third Quarter

February 2010



WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**  
Peter Goldmark - Commissioner of Public Lands

Caring for  
your natural resources ...  
now and forever

# Acknowledgements

The Washington State Department of Natural Resources' (DNR) *Economic and Revenue Forecast* is a collaborative effort. It is the product of information provided by private individuals and organizations, as well as DNR staff. Without their contributions, the quality of the Forecast would be greatly diminished.

I want to extend special thanks to those who provided information as part of our purchasers survey. These busy individuals and companies willingly provided information that is essential for forecasting timber removal volume.

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Thanks also to **Dorian Smith** and **Luis Prado** for designing the front cover and to **Bob Redling** for editing the final version.

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Prepared by  
Phil Aust  
Lead Economist  
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# Acronyms and abbreviations

Bbf	Billion Board Feet
CDN\$	Canadian dollar
CPI	Consumer Price Index
CV	Clear Vision Associates
Cwt	Hundred pounds
CY	Calendar Year
DNR	Washington State Department of Natural Resources
FDA	Forest Development Account
Fed	U.S. Federal Reserve Board
FOMC	Federal Open Market Committee
FY	Fiscal Year
GDP	Gross Domestic Product
IMF	International Monetary Fund
ISM	Institute for Supply Management
mbf	Thousand board feet
mmbf	Million board feet
NAFTA	North American Free Trade Agreement
OPEC	Organization of Petroleum Exporting Nations
PPI	Producer Price Index
RCW	Revised Code of Washington
REIT	Real-Estate Investment Trust
RISI	Resource Information Systems, Inc.
RMB	Renminbi, China currency – the basic unit is the yuan
RMCA	Resource Management Cost Account
SAAR	Seasonally Adjusted Annual Rate
TIMO	Timberland Investment Management Organization
US\$	U.S. dollar
WWPA	Western Wood Products Association
WTO	World Trade Organization
Y	Japanese yen

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## Preface

This *Economic and Revenue Forecast* projects revenues from Washington State trust lands managed by the Washington State Department of Natural Resources (DNR). These revenues are distributed to management funds and beneficiaries as directed by statute. The Forecast information is organized by source, fund, and fiscal year.

DNR revises its Forecast quarterly to provide updated information for trust beneficiaries and department budgeting purposes. (See the Forecast Calendar at the end of this section for release dates.) We strive to produce the most accurate and objective forecast possible, based on the current policy direction of the department and available information. Actual revenues will depend on the department's future policy decisions and changes in market conditions beyond the department's control.

This Forecast covers fiscal years 2010 through 2015. Fiscal years for Washington State government begin on July 1 and end on June 30. For example, the current fiscal year, FY 2010, runs from July 1, 2009 through June 30, 2010.

The baseline date (the point that designates the transition from 'actuals' to forecast) for this Forecast is December 31, 2009. The forecast beyond that date is based on the most up-to-date market and economic information available at the time of publication.

Unless otherwise indicated, values are expressed in nominal terms without adjustment for inflation. Therefore, interpreting trends in the Forecast requires attention to separate inflationary changes in the value of money over time from changes attributable to other economic influences.

Each DNR Forecast builds on the previous one, emphasizing ongoing changes. Before preparing each Forecast, international and national macroeconomic conditions and the demand and supply for forest products are re-evaluated. The impact on projected revenues from DNR-managed trust lands is then evaluated, given the current economic conditions and outlook.

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DNR Forecasts provide information that is used in the *Washington Economic and Revenue Forecast* issued by the Washington State Economic and Revenue Forecast Council. The release dates for DNR's Forecasts are determined by the state's Forecast schedule as prescribed by RCW 82.33.020. The table below shows the anticipated schedule for DNR's future *Economic and Revenue Forecasts*.

### **Economic Forecast Calendar**

<b>Forecast Title</b>	<b>Baseline Date</b>	<b>Draft Revenue Data Release Date</b>	<b>Final Data and Publication Date (approximately)</b>
June 2010	End Q3, FY 2010	June 8, 2010	June 30, 2010
September 2010	End Q4, FY 2010	Sept. 10, 2010	Sept. 30, 2010
November 2010	End Q1, FY 2011	Nov. 6, 2010	Nov. 30, 2010
March 2011	End Q2, FY 2011	Mar. 4, 2011	Mar. 31, 2011



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## Introduction and Forecast Highlights

**Market Changes Since the November Forecast.** Real growth in the gross domestic product (GDP) was 4.1 percent in the second half of calendar year (CY) 2009. Despite positive GDP growth, the U.S. economy lost 2.2 million jobs in the last half of CY 2009 as the total job loss in the recession grew to 8.5 million. Existing home sales recovered to 6.5 million seasonally adjusted annual rate (SAAR) in November but have since fallen by 22 percent to just 5.1 million in January. New homes sales were just 309,000 SAAR in January, the lowest ever recorded. Housing starts were down 6 percent in the fourth quarter to just 559,000 SAAR, in part because of poor weather conditions but also because of poor home sales.

**Timber Sales Prices.** Given the above market conditions, would you be surprised to find out that stumpage prices are up 22 percent from when we did the November forecast and up 73 percent from last April? Well, that's the case and we aren't just surprised, we are shocked! Pleasantly shocked but shocked none the less.

Composite Washington State Department of Natural Resources (DNR) stumpage prices reached a low in April 2009 of just \$130/mbf. When we did the November Forecast, stumpage prices had increased to \$185/mbf. In the last three months they have increased an additional 22 percent or \$40/mbf, to \$225/mbf. That's a 73 percent increase from the dark days of last spring.

Year-to-date FY 2010 (through January), the average price for DNR timber sales was \$221/mbf. We now forecast prices to average \$216/mbf for the full year—up \$19/mbf (or 10 percent) from that forecast in November.

**Timber Sales Volume.** There are no changes to DNR's planned timber sales level. In fact, DNR's sales program continues to run ahead of schedule. Through January, the department has sold 425 mmbf, 57 percent of the target 744 mmbf for FY 2010. In addition, the department plans to offer 158 mmbf over the next two months. If all the offered volume sells (which we expect), the total sold during the first three quarters of the current fiscal year will equal 78 percent of DNR's target volume for the year.

**Forecast Removal Volume and Removal Prices.** Based on our latest timber purchasers survey (conducted in early January), DNR timber sales purchasers have accelerated their planned harvest from the volume under contract into FY 2010. Forecast removals for the current biennium are up by 5.5 percent over that forecast in November. Because of the increase in forecast sales prices described above, forecast removal prices during the current biennium are up by \$7/mbf, or 3.4 percent.

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**Bottom Line for Timber Revenues.** As a result of the increase in forecast removal volume and prices, forecast timber revenues are up by \$23.9 million for the biennium, or 9.1 percent.

**Lease and Other Non-timber Revenues.** Since the November Forecast, the department had another very successful geoduck auction, averaging over \$10.50/lb., well over twice the forecast level. Geoduck prices are notoriously volatile, so we have not increased our forecast prices. Based on the year-to-date sales, forecast geoduck revenues are up by \$3.0 million for the current biennium. For the current biennium, the increase in geoduck revenue was more than offset by a reduction of \$3.5 million in forecast upland lease revenue in FY 2011.

**Caveats.** The recent increase in timber prices, while welcome, is surprising, given the extremely low level of housing starts, low demand for forest products, and excess lumber capacity. Timber prices have increased for the last nine months without a single setback. Our forecast assumes that prices will remain more or less at their current level for the next year and a half or so. If demand for lumber does not pick up soon, this forecast could prove to be too bold.

On the other hand, purchasers have increased their planned removals in response to higher log and lumber prices. If these higher prices continue purchasers could increase planned sales even more than we currently forecast. This would mean a shift of revenue from the next biennium to the current biennium.

At this point we judge the upside and downside risks to the forecast to be balanced.



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## Part 1. Macroeconomic Conditions

U.S. GDP increased at an annual rate of 5.9 percent in the fourth quarter of CY 2009, an improvement of 2.2 percent from the third quarter. But about 60 percent of the fourth quarter's performance was due to changes in business inventories. Businesses are restocking their shelves in anticipation of better sales ahead. But what happens if consumers don't come back? Even if consumers do come back, the inventory buildup won't contribute nearly as much to GDP beyond the first quarter CY 2010.

Going forward we expect growth will be sluggish but remain positive, averaging 2 percent for all of CY 2010. It will be 2011 before the U.S. economy begins to grow at its potential of 3 percent. The silver lining around a deep recession and a slow recovery is that the economy will have plenty of excess capacity to grow without threatening inflation, so there will be no reason for the Fed to increase interest rates *until* the economy gets going again.

China and India continue to be the only real bright spots in world economic growth but even their real GDP has slowed to just 6.2 percent for all of 2009. Although this is significantly less than the 10.6 percent rate in 2007, growth in China and India has not gone negative, and both nations are already on their way to recovery.

The world economy is expected to grow at 3.1 percent this year, and 4.2 percent in 2011. Developed countries will only manage growth at a little over 1 percent this year and 2.5 percent next year . . . if all goes well.

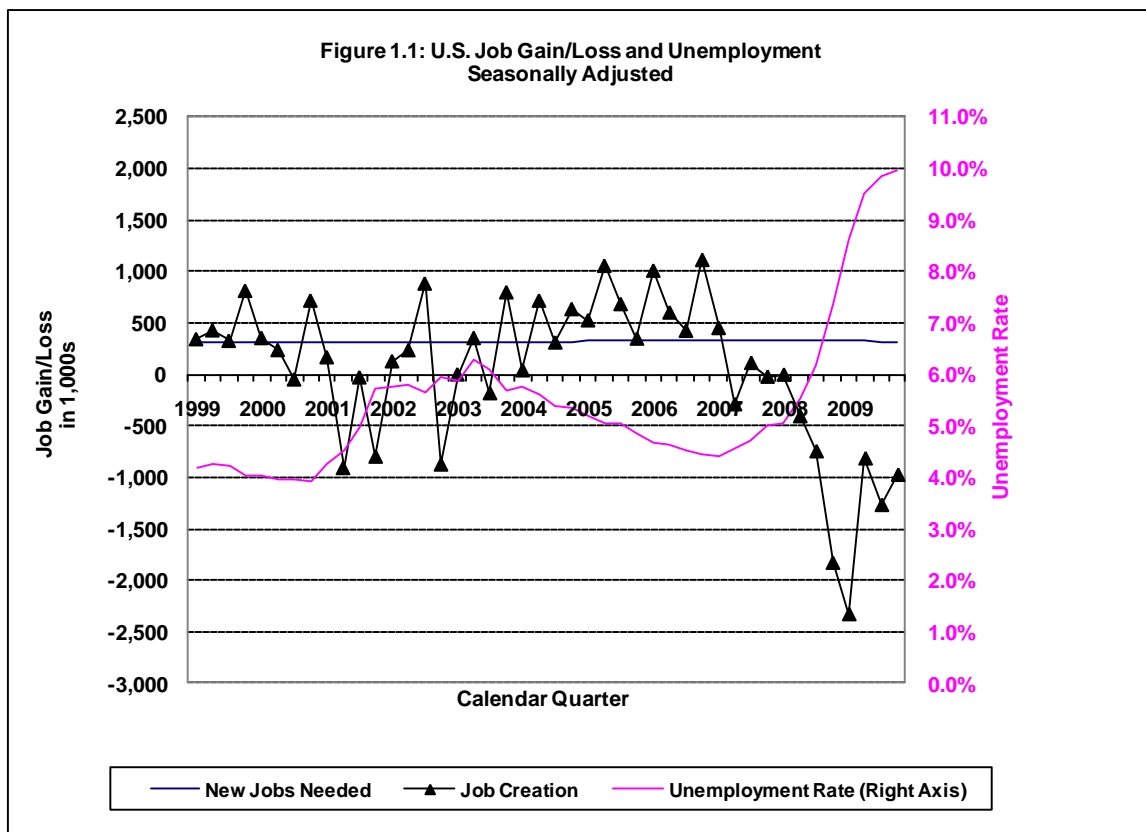
### U.S. economy

*The problem is recovery doesn't mean recovered, we need a long recovery to get back 7 million jobs.*

Lakshman Achuthan, managing director  
Economic Cycle Research Institute

**Employment.** During the fourth quarter of CY 2009, the level of U.S. job losses continued as the nation lost an additional one million jobs and the national unemployment rate ended the year at an even 10 percent. In January, there was a net gain of half a million jobs and the unemployment rate fell to 9.7 percent—the workforce actually grew for the first time in eight months.

Since May 2008, the U.S. economy has lost 8.0 million jobs and the unemployment rate increased from 5.0 percent to 9.7 percent. (See **Figure 1.1** for detail.)



We have written at length about how deep the job loss has been during this recession and how difficult the recovery will be. Suffice it to say that high unemployment will remain a drag on the U.S. economy throughout the forecast period. It would take five years of strong jobs growth to recover all of the lost jobs.

Given the predicted sluggish growth, we forecast that this year the economy will be lucky if the level of employment keeps even with the growth in the labor force, which would mean that unemployment will remain just under 10 percent. Beginning in CY 2011, the job recovery should pick up but the unemployment rate will come down very slowly as it did after the 2001 recession. This is roughly in line with the latest forecast put out by the Congressional Budget Office, which shows average unemployment rates of 10.1 percent for 2010 and 9.5 percent for 2011.

**Inflation.** The overall Consumer Price Index (CPI) had been running at or near zero (on a 12-month basis) for most of the year, but ended 2009 at 2.7 percent for the full year, due primarily to recovering oil prices. The core CPI (which excludes volatile food and energy prices) actually fell in the fourth quarter by an annual rate of 0.04 percent but increased by 1.8 percent for the full year (CY 2009).

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With so much excess capacity in the U.S. economy we expect the core CPI to remain low (under 2 percent) for the forecast period. Despite China and India's recovery, we aren't expecting crude oil prices to increase significantly for a year or two as total world demand remains relatively mild. After that, energy demand could start increasing rapidly again, pushing oil prices up over \$100/barrel—about double last year's price. The risk to our inflation forecast is that commodity prices could increase more than we expect as world demand increases while the U.S. dollar weakens.

**Interest Rates.** As long as the U.S. economic recovery remains weak, the Fed will not want to raise interest rates and cut off the recovery before it has gained a strong foothold. As long as inflation remains tame, the Fed has no reason to increase short-term interest rates. Given our forecast of low inflation and high unemployment, we expect the Fed to hold the federal funds rate between 0 percent and 0.25 percent until late this year, perhaps even longer.

In addition to keeping short-term interest rates low, the Fed has pumped billions of dollars into the financial system which has helped keep longer-term interest rates, including mortgage rates, low as well. For the last 18 months, the Fed has bought long-term Treasuries and the debt of mortgage finance firms Fannie Mae and Freddie Mac.

The Fed announced on February 10 that it will stop buying mortgage securities in March, and is preparing to start selling. When it does, this could result in a significant bump in mortgage rates, perhaps by a full percentage point. But given low inflation, and high unemployment and a slow recovering housing market, it may be sometime before the Fed reins in the money supply.

*I currently do not anticipate that the Federal Reserve will sell any of its security holdings in the near term, at least until after policy tightening has gotten under way and the economy is clearly in a sustainable recovery.*

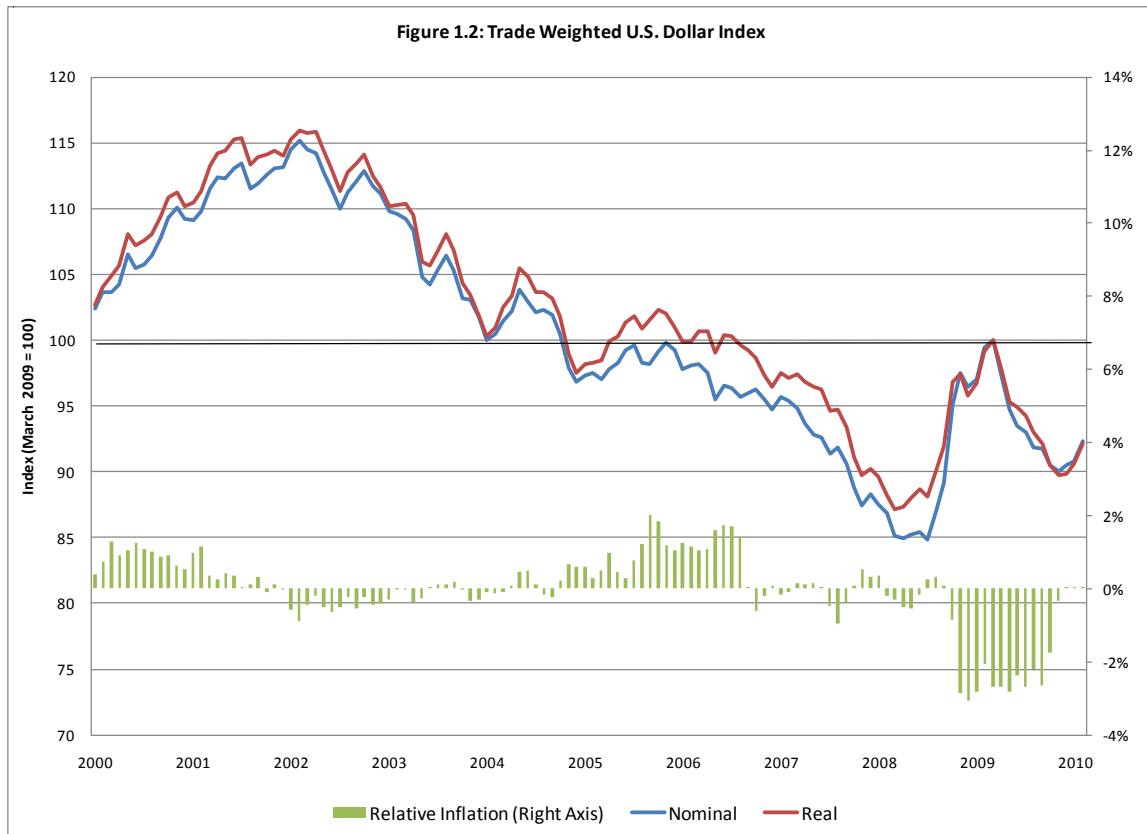
*Ben Bernanke  
Federal Reserve Chairman  
2/10/2010*

Since March 2009, the yield on the 10-year Treasury jumped from 2.5 percent to 3.6 percent, an increase of 44 percent! The yield is expected to increase to over 4 percent early this year and to 4.25 percent by the end of the year—another 18 percent increase. Mortgage rates are currently very low, averaging 5.0 percent. But they are likely to increase as long-term bond rates increase. We look for mortgage rates to approach 5.5 percent by early next year and possibly 6.5 to 7.0 percent by the end of the forecast period.

**U.S. Consumption.** Real household income has fallen by 3 percent since the recession began, and real wealth has fallen by more than 20 percent. The average US household has more than \$8,000 in credit card debt. As a result, US households have gone through an attitude adjustment and are more interested in paying down debt than using credit for purchases. We expect this pattern of behavior to continue for some time.

Still, consumer spending was better than expected in the fourth quarter of CY 2009, a clear indication that consumers are getting used to the new reality. We anticipate consumption will grow by 3 percent this year over 2009, but that's only because 2009 was so low. Consumption will remain low until employment improves and real incomes begin to rise, neither of which are expected to happen this year.

**Trade and the U.S. Dollar.** Figure 1.2 shows the trade-weighted U.S. dollar index for this decade. The dollar has fallen through most of 2009 but has turned up since November.

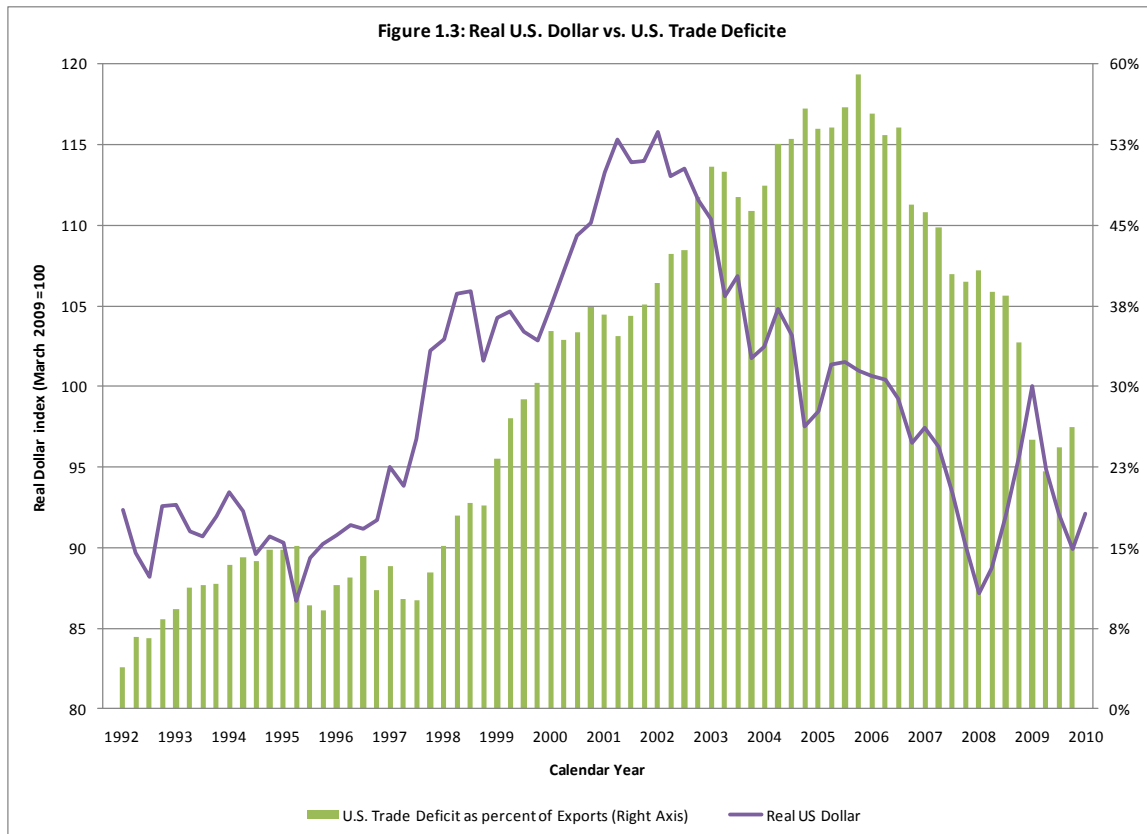


Going forward through the forecast period, we expect the dollar will continue to fall as the economies of our trading partners grow faster than the U.S. economy. We also expect the interest rates of our trading partners to increase more than those in the United States, which will put added downward pressure on the U.S. dollar.

In addition, if and when China allows its currency to float against the U.S. dollar, the dollar is likely to fall even further. Since peaking at \$801.5 billion in debt holdings last May, China has reduced its exposure to U.S. debt by a total of \$46 billion. China reduced its Treasury holdings by \$34 billion, or 4.6 percent, in December, the last month we have figures for. This reduction may signal that the Chinese plan to trim their holding of U.S. debt, before revaluing the yuan.

China bought nearly \$70 billion of U.S. goods in 2009, making it the No. 3 destination for U.S. exports, behind only Canada and Mexico, so a stronger yuan will benefit U.S. balance of trade.

**Figure 1.3** shows the relationship between the real U.S. dollar and the U.S. trade deficit shown as a percentage of U.S. exports. The trade deficit generally follows the dollar but with a considerable lag. For example, the dollar peaked in 2001 but the trade deficit peaked about 4 years later in 2005 at almost 60 percent. The dollar reached a low in early 2008 and the trade deficit fell to 23 percent of exports in early 2009.



Since we forecast the dollar will continue to fall over the forecast period, we expect the trade deficit to fall as well. The major risk to this forecast is slow growth in the European economy. The euro could suffer because of financial problems in weaker members of the European Currency Union. The U.S. dollar is still the economic haven in financial storms. So, if Europe's financial problems get worse the dollar would strengthen.

**U.S. Real Gross Domestic Product (GDP).** GDP increased at an annual rate of 5.9 percent in the fourth quarter, an improvement over the 2.2 percent in the third quarter. But about 60 percent of the fourth quarter's performance is due to changes in business inventories. Businesses are restocking their shelves, in anticipation of better sales ahead. The inventory buildup won't contribute nearly as much to GDP beyond the first quarter.

Consumer spending and business investment are expected to remain weak this year, so real growth in CY 2010 will depend on continued high levels of government spending,

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continued easy money policy by the Fed, and growth of net U.S. exports because of growth of our trade partners' economies. We expect growth of about 2 percent for the full year but a lot could go wrong, so most of the risk is to the downside.

At this point we expect real U.S. GDP to return to its potential in 2011. By then, we expect interest rates to begin increasing, acting as a brake on the U.S. economy. It's also still possible that we could see a significant setback. In fact, we judge the probability of such a setback as having increased since our November Forecast.

## World economy

*"You have to pay attention to what's happening in the world's No. 2 economy."*

David Wyss,  
Chief Economist  
Standard & Poor's  
02/12/2010

China is now the second largest economy in the world, passing Japan in GDP in 2009. And what happens in China matters as much (if not more) to the world economy than what happens in the U.S. because even though China is still No. 2, its growth is now greater in absolute terms than US growth and five times that of Japan. Consequently, China has become a big part of the world engine of growth. And since China and its economic policies are fairly opaque, it's more likely to produce an "economic surprise."

The financial crisis caused a very significant slowdown for China, even though its economy never actually contracted. To offset the drag from declining exports, China put into place expansionary policies on a large scale. China's recovery has been investment driven and was spurred by government spending and the stimulus from an enormous lending boom. The Chinese government instructed banks to increase lending, and bank loans grew by more than 30 percent year-over-year by the fall of 2009. The largest use of new funds has been for infrastructure.

The result has been a burst in Chinese growth which has rippled throughout Asia and helped lead the world recovery. Its GDP is forecast to grow 9.4 percent (about \$0.45 trillion in U.S. dollars) this year while the United States is forecasting to grow only about 2 percent (about \$0.29 trillion).

China's export performance suffered greatly in the current crisis. Exports account for roughly 30 percent of Chinese GDP, and it will be difficult to maintain recovery if its exports do not soon revive. To help keep its exports up, China has held not allowed the yuan to increase against the dollar since the economic slowdown began.

As long as China pegs its currency to the dollar, China's economy will to some extent be stimulated by the Federal Reserve easy money policy. Letting the yuan appreciate against

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the U.S. dollar would mitigate growing inflationary concerns. It also would help ease global trade imbalances and encourage the development of China's domestic consumption.

The recent economic slowdown has pointed out the downsides for China and the world of China pursuing an export-oriented growth strategy; namely, China's vulnerability to adverse foreign shocks and a growing imbalance between the U.S. dollar and the Chinese yuan. We believe the global economic crisis has hastened the day when the Chinese economy looks more to internal consumption as an engine of growth and allows the yuan to float against the U.S. dollar.

After showing early signs of recovery, Europe's GDP grew at an annual rate of just 0.4 percent in the fourth quarter. Poor consumer spending at home and a relatively strong euro are keeping the European economy down. While the financial crisis appears to have been averted for now, the ability of European governments to stimulate their economies through fiscal policy is severely limited.

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## Part 2. Log and Lumber Industry Factors

This chapter focuses on the specific factors that affect the stumpage values and overall timber revenues received by the Washington State Department of Natural Resources (DNR).<sup>1</sup> Stumpage prices reflect demand for lumber and other wood products, timber supply, and regional and local milling capacity. The demand for lumber and wood products is directly related to the demand for housing and other end-use markets.

### U.S. housing market

**Housing Prices.** The seasonally adjusted Case-Shiller<sup>2</sup> index of existing home prices for the 20 largest metropolitan areas in the U.S. increased by 3.6 percent on a seasonally adjusted annual rate (SAAR) during the last seven months ending in December—that’s an annual rate of 6.2 percent. (See **Figure 2.1**) On a seasonally adjusted basis, 15 cities saw increases over the last quarter, while six cities (Miami, Tampa, Atlanta, Chicago, New York, and Cleveland) saw existing home prices fall.

At the end of CY 2009, 11.3 million homeowners—24 percent of all homes with mortgages—owed more than their homes were worth. For many homeowners this is just a minor irritation, but if a homeowner becomes unemployed or has a financial emergency they may be forced out of their homes. Or, if they need to downsize or sell their home to relocate for a job, they can’t. Negative equity is a significant drag on both the housing market and on economic growth. It is driving foreclosures and decreasing mobility for millions of Americans.

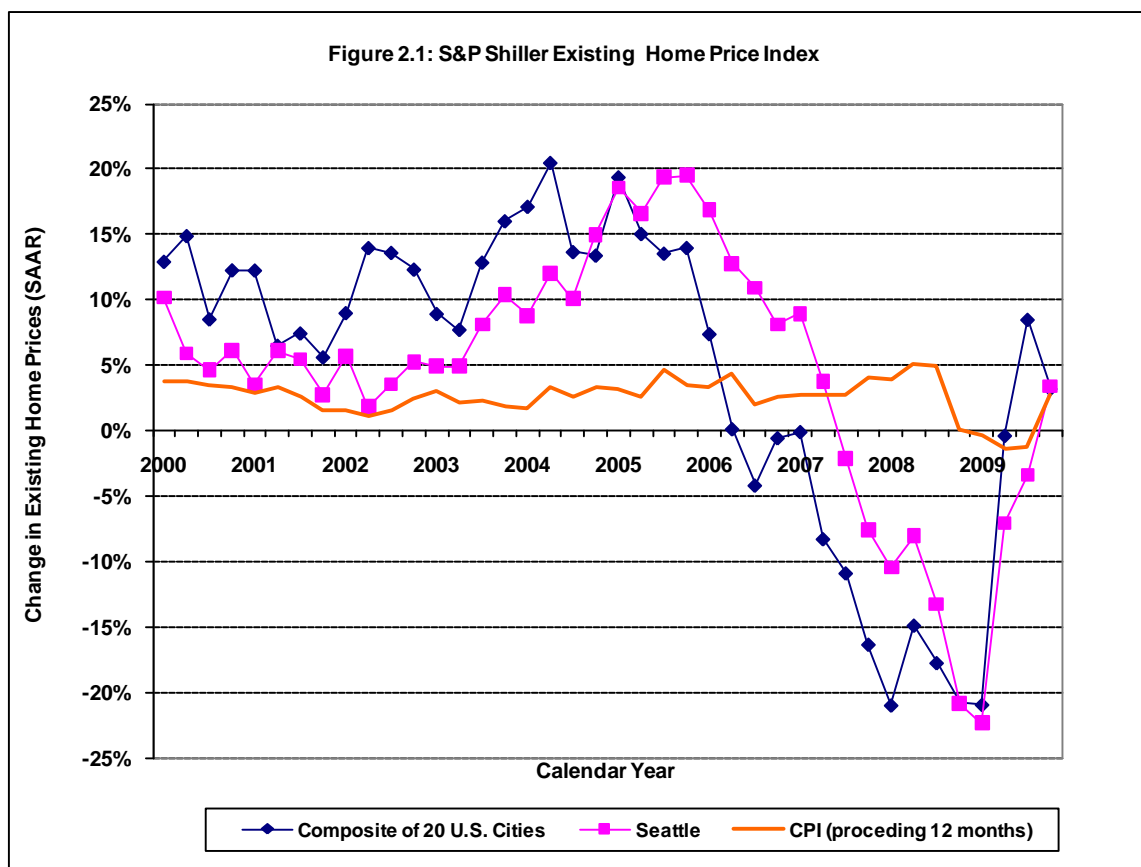
We have now seen seven months of appreciation in the index, but this does not mean that prices won’t start falling again. The number of existing homes heading towards liquidation suggests that the shadow inventory may grow, resulting in lower home prices later this year. Further, it is likely the shadow inventory will weigh on the market over the next three years as these homes work their way through the system. It’s beginning to

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<sup>1</sup> Although DNR timber sales are a significant source of timber in the Pacific Northwest, volumes generally are not sufficiently large enough to affect prices.

<sup>2</sup> The S&P Case-Shiller price index represents about half the total homes in the U.S. The index is heavily skewed towards major metropolitan areas where price changes tend to be greater than in less urbanized areas. The S&P Shiller price index is down by almost 32 percent from its peak, while the Federal Reserve puts the reduction in the total value of the U.S. homes at about 18 percent. Using the Fed numbers, the average owner’s equity in their homes has fallen from almost 60 percent early in the decade to just over 40 percent today.

appear that the recent upward reversal in housing prices may be the result of a temporary delay in the supply of foreclosed homes on the market rather than a sign that the housing stock is in balance with demand.

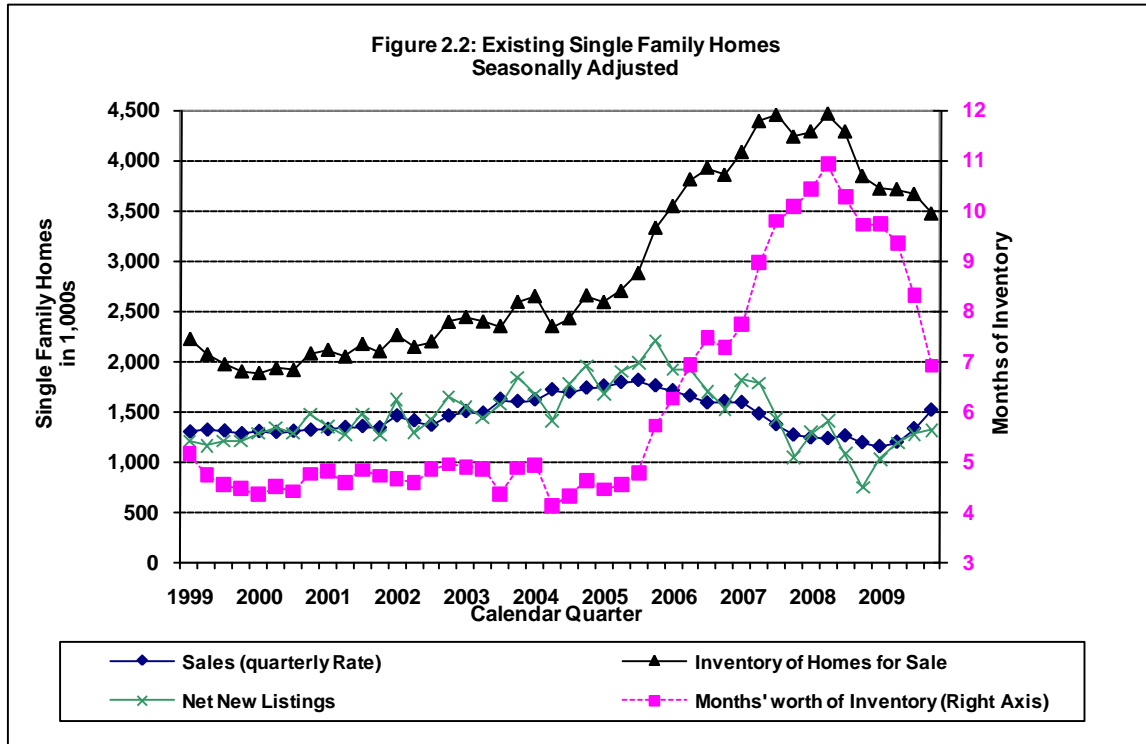


**Existing Home Sales.** Over the last year, the market for existing homes has been recovering as existing home sales increased from 4.7 million SAAR last December to 5.5 million this December—an increase of 15 percent. Perhaps more remarkable is that 5.5 million sales is higher than the rate of existing home sales in the pre-bubble period of 1999-2003. (See **Figure 2.2.**)

The surge in home sales was driven by buyers responding strongly to the first-time home buyers' tax credit combined with record low mortgage interest rates and lower existing home prices. Still, not all the news is good, sales in December 2009 were down 17 percent from those in November, and January 2010 sales were down again by an additional 7 percent. In total, January sales were down 22 percent from November but still up 11 percent from last January.

Distressed property sales accounted for 32 percent of fourth quarter transactions, down from 37 percent a year earlier. Sales of foreclosed homes likely will reach 1.9 million in 2010, up from about 1.7 million last year. That compares with a normal foreclosure sales rate of about 500,000 per year before 2007 when the housing bubble burst.

If you back out the extra foreclosure sales of about 1.3 million, that brings the current sales down from 5.5 million to 4.1 million (about 1 million per quarter)—well below the pre-bubble level. It will be 2011 before the number of foreclosures sales falls as the economy improves, receding to about 1.1 million—that still means an extra 600,000 homes on the market at very low prices.



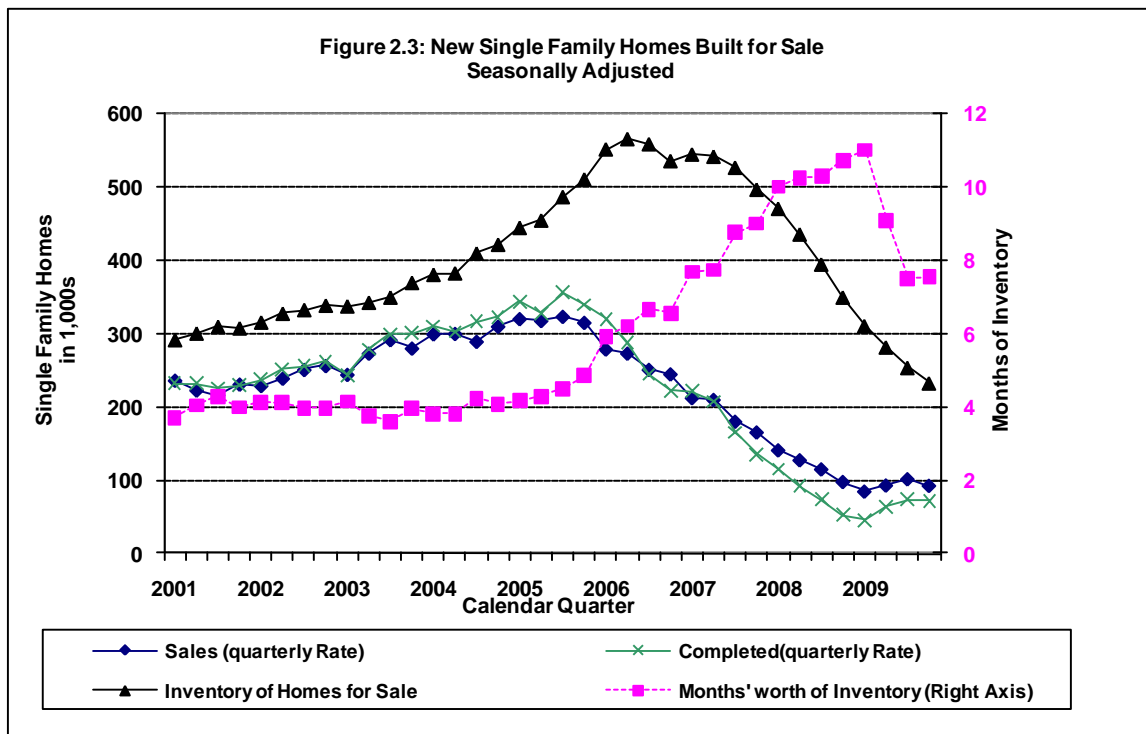
Over the last year and a half, the inventory of existing homes for sale has fallen by almost 1.3 million homes down to 3.3 million in January. A large part of that decline is simply homeowners taking or holding their homes off the market and waiting for the market to recover. Even so, at its current level of 3.3 million, the inventory of existing homes for sale remains well above the pre-bubble average of 2.1 million. And remember, this does not include the ‘shadow inventory’ of homes that are likely to come back on the market as demand and prices increase.

Although the months’ worth of inventory at the current sales rate has fallen from almost 11 months to less than 7 months, that’s still well above the normal 4.5 to 5 months worth of inventory prior to the bubble. We project that it will be late in CY 2010 to early 2011 before the months’ worth of inventory falls to normal levels.

The primary driver of housing weakness is not a supply overhang—indeed the U.S. housing stock is under-built relative to fundamental demand. Rather the weakness is demand-driven (or lack thereof). Sky-high unemployment, underemployment, and the threat of job loss have led to an unprecedented contraction in households that has sharply reduced the demand for housing.

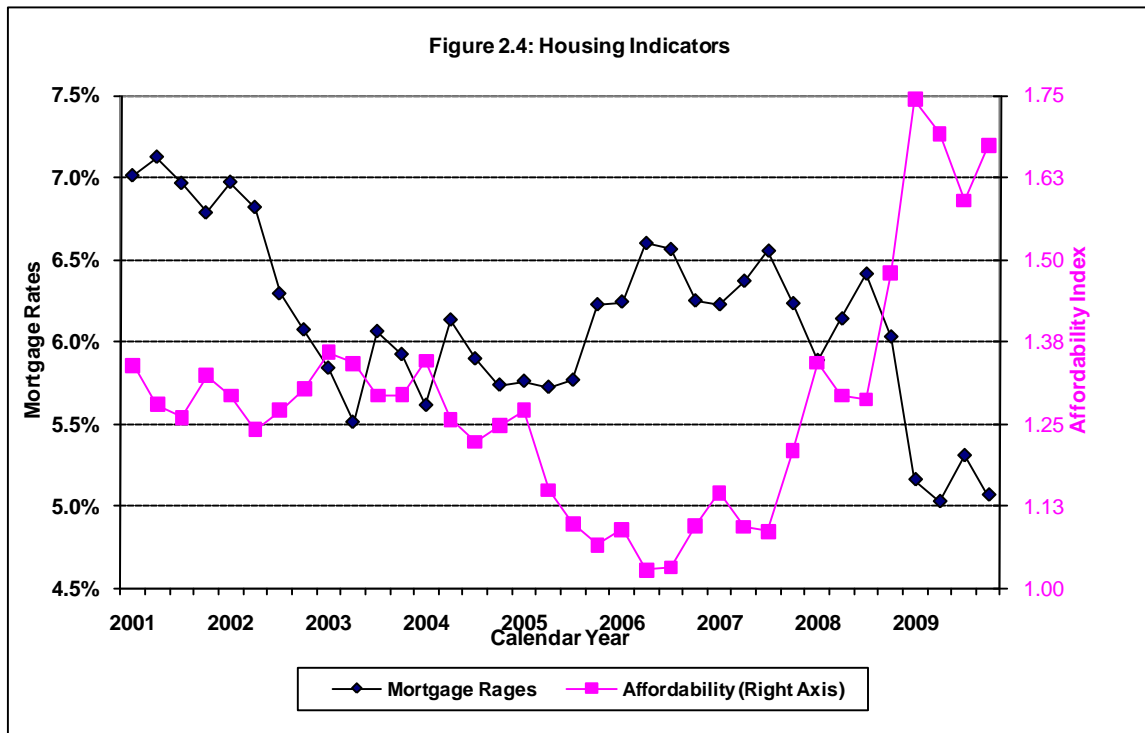
**New Home Sales.** Sales of new homes plunged to a record low in January, as the weak economy and a glut of foreclosed homes continue to weigh on the market. The seasonally adjusted annual rate of new home sales plummeted 11.2 percent to 309,000, compared with a revised rate of 348,000 in December. That's a decline of 6.1 percent from January 2009. It was the lowest rate since the government began keeping records in 1963 and comes after declines in November and December. The market for new homes is being pressured by the glut of foreclosed properties and high unemployment.

The recent poor performance of new home sales makes the trend over the last year look sideways at best. We believe that new home sales will remain depressed because of the abundant supply of inexpensive existing homes on the market. This abundance will weigh on the market until well into 2012 when the oversupply of existing homes is worked off the market and existing home prices increase enough to make new homes competitive.



The inventory of new homes fell in the fourth quarter but most of that happened between September and November. During the last two month of the quarter and in January new home sales just matched completions. The inventory of new homes for sale is now below historic normal levels, but the inventory relative to the current sales rates remains elevated (now at 7.3 months, while normal is 4 months worth). See **Figure 2.3** for detail. The average size in square feet and the price of new homes has also fallen.

**Affordability.** Mortgage rates fell in December to 5.06 percent, down from 6.25 percent a year ago. The income needed to qualify for that median existing single family home is now \$36,576 compared to \$58,544 a year ago, down by 36.9 percent. The medium family income fell from \$61,323 to \$59,908, which was a 2.3 percent decline. (See **Figure 2.4** for detail).



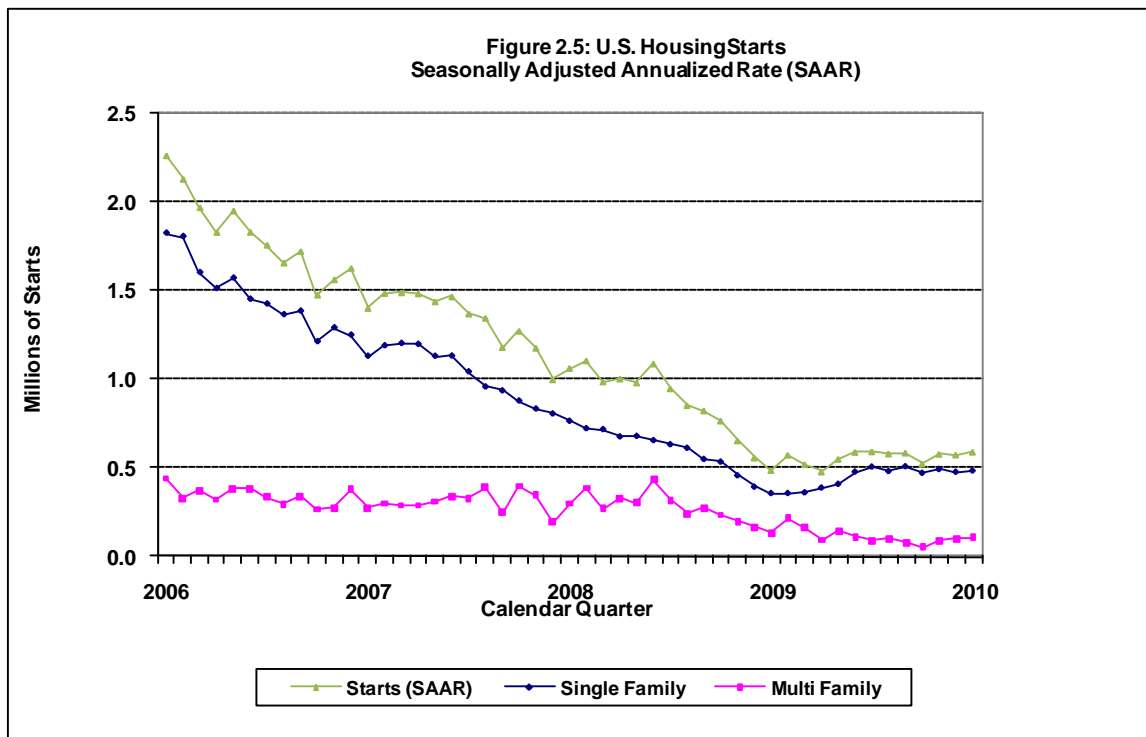
The **Affordability Index** is the ratio of median family income and the income required to qualify for the median-priced existing single-family home. In December 2009 the affordability index was \$59,908/\$36,576 or 1.638.

**Housing Starts.** Housing starts averaged a disappointing 559,000 units SAAR in the fourth quarter, a 5 percent decrease from the third quarter. (See **Figure 2.6** for detail.)

Just 553,000 houses were built in all of 2009, down 38 percent from 2008. That total is the lowest since 1945. As a result, only 7.2 billion board feet of lumber was used in new construction, just 26 percent of the 27.6 billion board feet used only four years earlier in 2005.

Single family housing starts were at a low point of just 357,000 units SAAR in January of 2009. The levels increased 38 percent in six months, reaching 478,000 in June; since then they have remained more or less flat, averaging 487,000 through January 2010. (See **Figure 2.5** for detail.)

Over last year January to January, multifamily starts have been disappointing, falling 18 percent from 131,000 in January 2009 to 107,000 this January. The sharp fall in multifamily starts is due to low rents, high vacancy rates and difficulty getting financing – none of which are good signs for single family housing starts going forward.

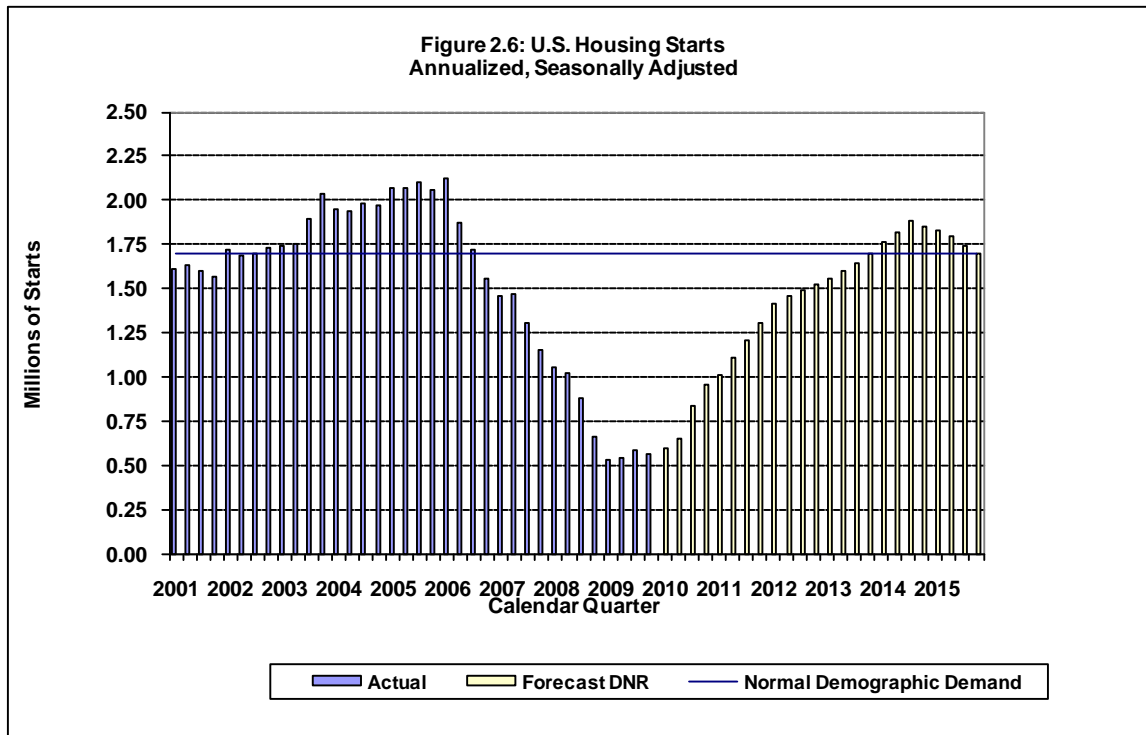


The national apartment vacancy rate rose to 8 percent in the last quarter of 2009. That is the highest level reported since they started tracking vacancies 30 years ago. A year ago the vacancy rate was at 6.7 percent.

**So why are housing starts stuck on the bottom?** We have seen three years of housing starts at below demographic need (about 1.7 million starts per year) for shelter (See **Figure 2.6**). In theory, that should have more than made up for the over production during the housing bubble. In fact, if the housing stock was about in balance with demand before the housing bubble, then we should currently have pent-up demand for about 1.5 million homes. Yet the signs (high vacancy rate and falling rents) are that the U.S. still has an oversupply of shelter.

The problem is that because of the recession and the elevated unemployment rate, not only have 8 million people lost their jobs, many others are *afraid* of being laid off or losing work hours, income and/or benefits. As a result, many people feel pressure to reduce their expenditures including their housing costs due to lower wealth and lower incomes.

As a consequence, household formation rates have fallen. People are moving in with their families or friends. Reduced household formation frees up existing units, increases vacancy rates and drives down rents and the demand for shelter. As a consequence, average rent fell 3 percent last year and vacancy rates of both rental and single family homes now stand at record levels.



Once again, we have reduced our housing starts forecast over the entire forecast period. We now expect the bottom to be flatter than we previously forecast and last until midyear. Starts should then increase more gradually than our previous forecast, and not reach the normal demographic demand until late in 2013, which is almost four years from now.

By then, the theoretical pent-up demand (the amount of actual starts are short of demographic needs) will be over three million. The demographic demand is based on projected population growth and past household formation rates and per household shelter demand. But people's attitude towards shelter has been changed by their recent experience and it's not clear if these assumptions will hold going forward.

Still, because of a strong second half of the year, we are projecting housing starts to increase fairly quickly by 37 percent in 2010 to 757,000. While this increase will be a substantial improvement compared to 2009, it represents only half the total construction in 2007. The Western Wood Products Association (WWPA) projects housing starts will increase only to 668,000 in 2010. We don't expect housing starts to exceed 1 million units before 2011.

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## Lumber, logs, and stumpage prices

*(Lumber) Markets should start the long road to recovery in 2010. But given the weak economy, continued high home foreclosure rates and a financial system struggling for stability, gains in lumber demand and production will be modest.*

Western Wood Products Association  
Economic Forecast  
November 5, 2009

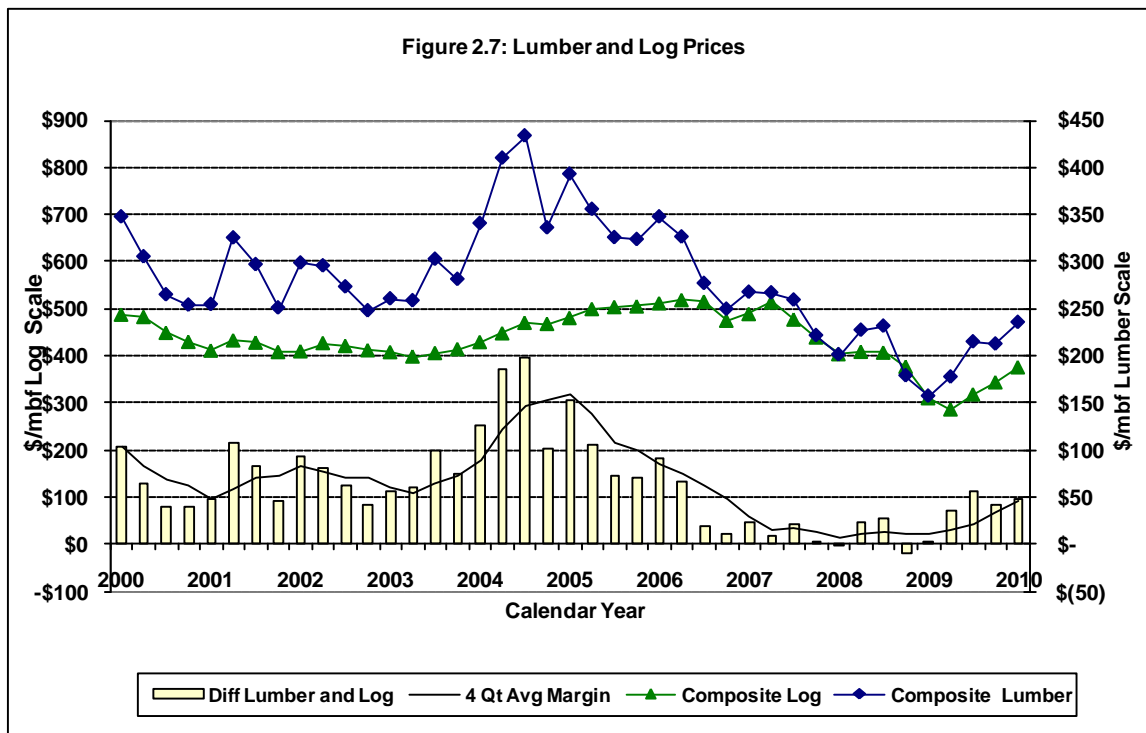
**Lumber Production.** Total North American lumber production for 2009 was just 45.3 mmbf, which is down 40 percent from the record 75 mmbf produced in 2006 and down 16 percent from 2008. For all of CY 2009, coastal lumber production is down 16.7 percent from CY 2008 to 6.4 mmbf<sup>3</sup>. Western mills are running at just 45 percent of capacity.

With housing starts not expected to make a significant recovery any time soon, lumber production is expected to recover only modestly as well. RISI predicts that North American production will increase just 4.4 percent to 47.3 mmbf in 2010 and just 9 percent to 51.5 mmbf in 2011—still 27 percent below the average North American production in the first half of the decade.

**Lumber and Log Prices.** If I told you that: 1) unemployment was over 10 percent, 2) new homes sales are at record low levels, 3) housing starts were bumping along the bottom at just 35 percent of demographic demand, 4) lumber production was down 40 percent, and 5) mills are operating at less than 50 percent of capacity—would you be surprised to find out that lumber prices are up 50 percent from their lows and log prices are up over 30 percent? Well, that's the case and we are shocked!

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<sup>3</sup> Coastal region is western Washington, western Oregon, and western California.



**Note:** The volume of lumber (measured in mbf lumber tally) actually milled from logs normally exceeds the Scribner volume measurement. The graph above uses different axes to adjust for the difference in the two measurement scales. Here the relationship is assumed to be 2:1. “Margin” is defined as the average price difference between lumber and logs after an adjustment for the two different measurement scales.

From record lows \$156/mbf last January, lumber prices have increased \$79/mbf (Lumber Scale), or 51 percent, to \$235/mbf this January. Over that same period log prices increased \$25/mbf when converted to Lumber Scale equivalent or 32 percent.

*“What is going on?”*

RISI

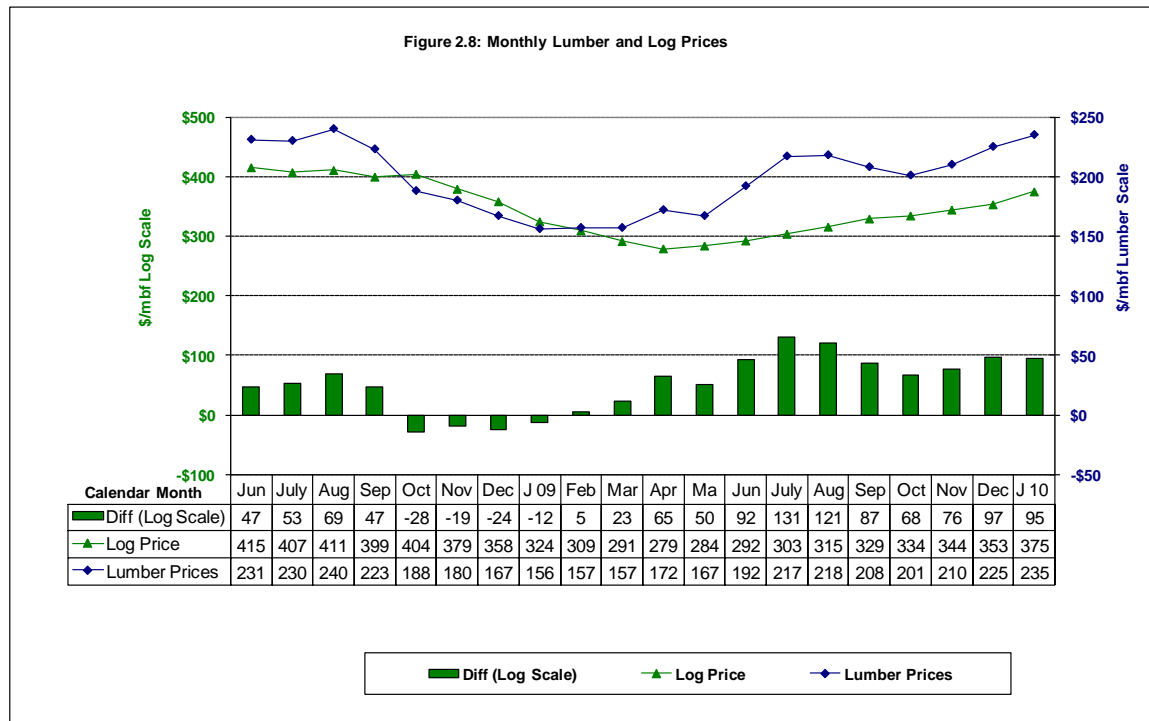
“Commenting on the strength of lumber markets”

February 22, 2010

The recovery in lumber prices has been a welcome surprise, but clearly higher lumber prices are **not** the result of increased demand—our analysis indicates that a recovery in end-use demand is a long way off. We also do not believe that the current price run-up is the result of lower *long term* supply of lumber or logs. Rather, the recent bump in lumber prices is the result of extremely low inventory of lumber and logs, coupled with poor weather limiting log harvest.

It costs money to increase production, open a mill, add a new shift, or give existing employees overtime, so mills are reluctant to increase production especially if they don’t expect the orders to keep coming in. Couple this with empty log decks and empty lumber yards in the middle of winter and you’re likely to get a temporary price spike. And while percentage price increases have been significant, they are from unprecedented low levels.

As a result, the increases may look better than they really are. (See **Figures 2.7 and 2.8** for detail.)



Lumber prices hit a high of \$235/mbf (Lumber Scale) in January of this year; that was \$34/mbf or 17 percent above the \$201/mbf in October when we issued our November Forecast. Over the same period, log prices have increased by \$40/mbf (Scribner log scale) or 12 percent. To compare lumber and log prices we have to account for the average overrun, which is about 100 percent. Therefore, a \$34/mbf increase in lumber prices translates into a \$64/mbf increase in Scribner log scale, so manufacturing logs into lumber has actually become more profitable over the last three months.

We expect lumber prices will retrace much of the increase they made over the last three months once inventories have been replenished. As it will be easy for mills to catch up with demand once the weather improves and logs start flowing into the mills, demand is only expected to climb from a low of 45 percent of capacity in December of CY 2009 to 65 percent of capacity by mid-2010. This number is well below operating rates (about 85 percent) that can be expected to spur *sustained* higher lumber prices. This excess capacity will keep lumber prices from making a sustainable rally any time soon.

Still, we don't expect lumber prices to fall all the way back to where they were in January 2009. Over the next six months, as a result of lower lumber prices and higher log prices, mill conversion margins will once again be squeezed and there will be renewed downward pressure on log and stumpage prices.

**Timber Supply.** Timber harvest levels from private lands in CY 2006 through CY 2009 were well below growth levels, and as a result, standing timber inventories have grown. The resulting unintentional buildup of standing timber inventories on private lands during

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the last three years represents an extra supply of logs going forward. And given our forecast for the lumber demand, this pent-up supply of standing timber will actually grow through most of the Forecast period.

This will have a direct impact on stumpage and delivered log prices over this period. It's unclear exactly what the impact on timber prices will be in part because of the shift in log supply away from the mills and towards state and other private supplies. In 2008, only about 18 percent of the logs processed in mills (compared to 22 percent in 1998) came from the mill owners' land, the majority about 57 percent (compared to 61 percent in 1998) came from other private lands, including TIMOs and REITs, and 25 percent (compared to 17 percent in 1998) came from DNR and other public lands.<sup>4</sup>

The increased proportion of log supply coming from DNR-managed lands and the shift by the department to log sort sales as well as the growth of TIMOs and REITs has probably increased market competitiveness.

We talked about the possible impact of this shift in private timberland ownership to TIMOs and REITs in the June 2009 Forecast. Generally, we concluded then and still believe that the predominance of TIMOs and REITs tended to limit the fall of log prices during the recession, resulting in the very low conversion returns for mills during late 2006 through 2008.

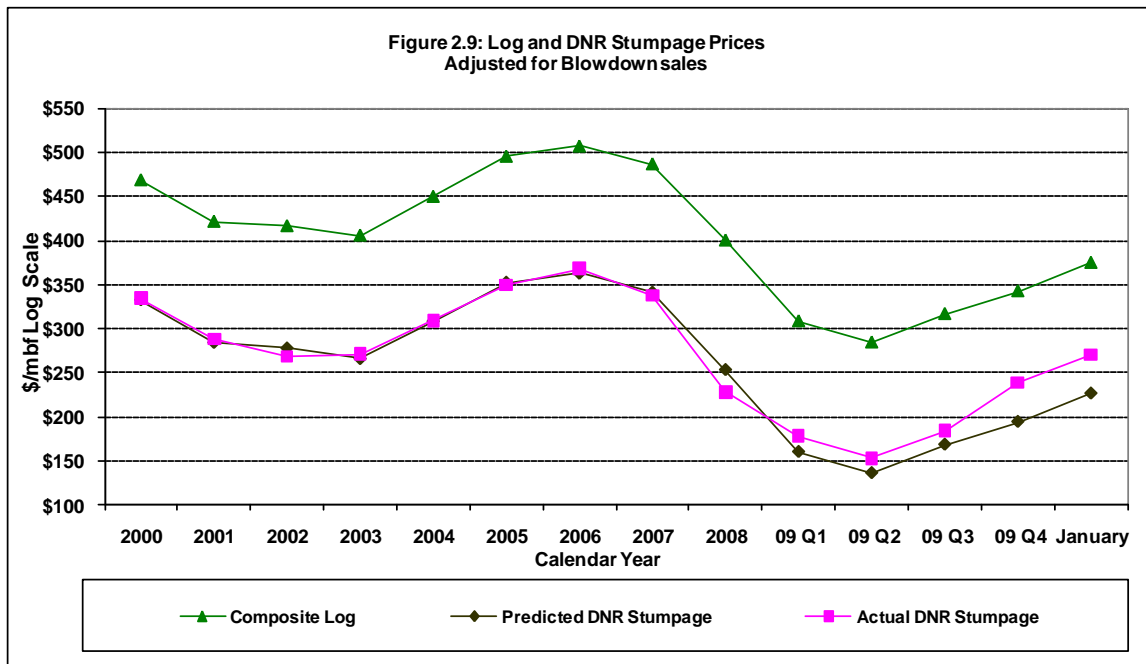
However, that does not mean that TIMOs and REITs will be able to push log prices up as markets recover. Cash flow on timberland investments has significantly dropped during the recession, which really has been more of a depression than a recession in the timber industry. Many of the new private timberland owners are highly leveraged and are under pressure to harvest no matter what the prices are in order to pay interest and principal on that debt. But those with little or no debt can pull the timber off the market and wait for better prices. Over time, the pressure to harvest will grow for all groups, and price expectations will reset downward.

As a result, we believe that sluggish demand, coupled with ample timber supply will keep timber prices relatively low over the forecast period (through 2015). We don't expect timber prices to return to the levels reached in CY 2006 and 2007, rather we expect our composite log prices to remain below \$450/mbf Scribner. If this is true, it means that stumpage prices are likely to remain below \$300/mbf.

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<sup>4</sup> Washington State Mill Surveys 2008, 1998, Dorian Smith, Washington State Department of Natural Resources, Olympia, WA

**Log and DNR Stumpage Prices.** Figure 2.9 shows average annual log prices and the predicted DNR stumpage prices given those log prices vs. actual stumpage prices adjusted for blowdown<sup>5</sup>. In CY 2008, DNR stumpage prices were \$25/mbf less than predicted by the econometric model. This difference was probably due to a number of factors but it is most likely that buyers' fatigue from disappointing forest product markets and low profits was the main culprit (see March 2009 forecast for detail).



During CY 2009, the actual prices have been \$25/mbf, or 15 percent more than those forecast based on log prices. In January the gap even widened to \$44/mbf, or 20 percent. This forecast error may be due to a number of factors—one of which is the quality of timber being offered by DNR. Because of the generally low prices, DNR has offered fewer low-valued sales than usual. This has increased our average price above what it otherwise would be. Another factor is the increase in contract harvest sales which tend to bring higher prices than stumpage sales.<sup>6</sup>

Given current log prices of \$375/mbf, the model is projecting stumpage prices of \$225/mbf—up from \$195/mbf, or 15 percent, from when we issued the November Forecast.

<sup>5</sup> DNR actual prices calendar year 2008 through August and the third quarter are adjusted for blowdown sales (timber damaged in a December 2007 storm in southwestern Washington).

<sup>6</sup> In “Contract Harvest Sale” the department contracts for the harvest and delivery of logs and sells individual sorts of logs delivered to the purchasers' mill or predesignated location. In a “Stumpage Sale” the department sells standing timber and the purchaser is responsible for the harvest and delivery of the logs.

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## Part 3. DNR's Revenue Forecast

This Revenue Forecast includes revenues from timber sales, upland leases, and aquatic leases. It also forecasts revenues to individual funds. Some caveats about the uncertainty of revenue forecasting are summarized at the end of this section.

### Timber revenues

The Washington State Department of Natural Resources (DNR) sells timber through contracts. The department determines the total volume to be offered for sale each month and the minimum bid for each sale. The sale is awarded to the highest bidder and the average sales price (\$/mbf) is set at the time of auction. DNR collects a 10 percent initial deposit at the time of sale and holds it until the sale is completed. Revenues are collected at the time of harvest (removal). The initial deposit is credited as the last 10 percent is harvested. Contracts sold during the last 12 months varied in duration from less than three months to three-and-a-half years, with an average (weighted by volume) of 22 months. The purchaser determines the actual time of harvest within the terms of the contract. As a result, timber revenues to beneficiaries and DNR management funds lag current market conditions.

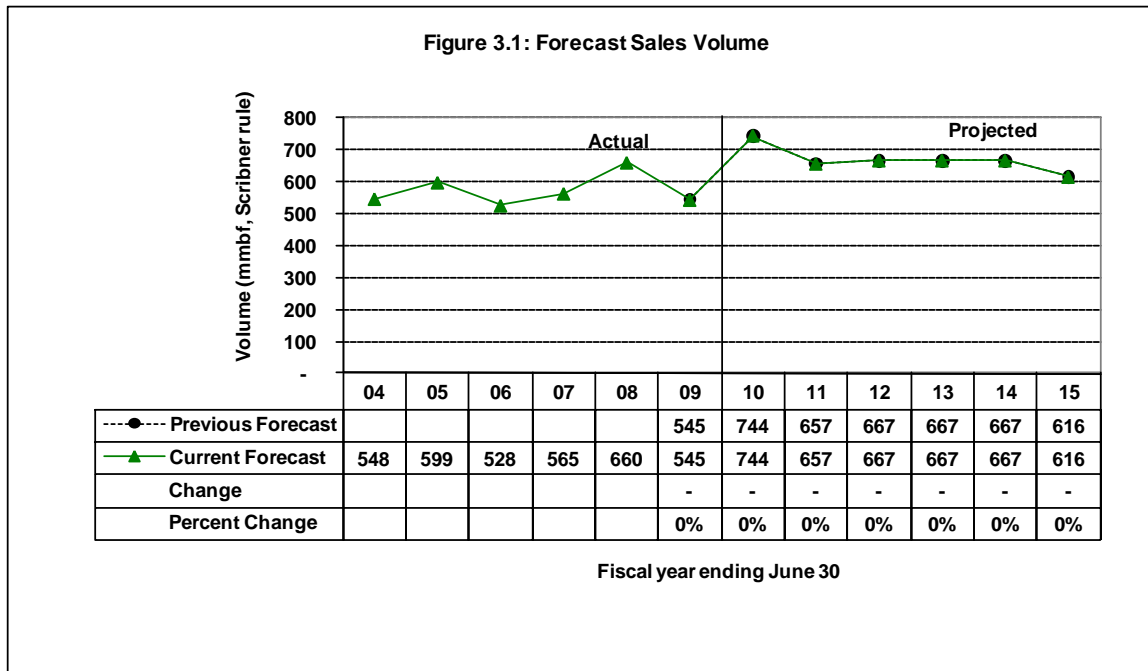
Timber that is sold but not yet harvested is referred to as 'volume under contract' or 'inventory.' Timber is added to the inventory when it is sold and removed from the inventory when it is harvested.

**Timber Sales Volume.** During the first seven months of FY 2010, the department had better-than-forecast results from our timber sales<sup>7</sup>. In the current fiscal year to date, DNR has sold 425 mmbf or 57 percent of the volume scheduled to be sold this year. We have not changed our planned sales volumes from the November Forecast. (See **Figure 3.1** for detail).

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<sup>7</sup> Department sales results are available on the DNR at:

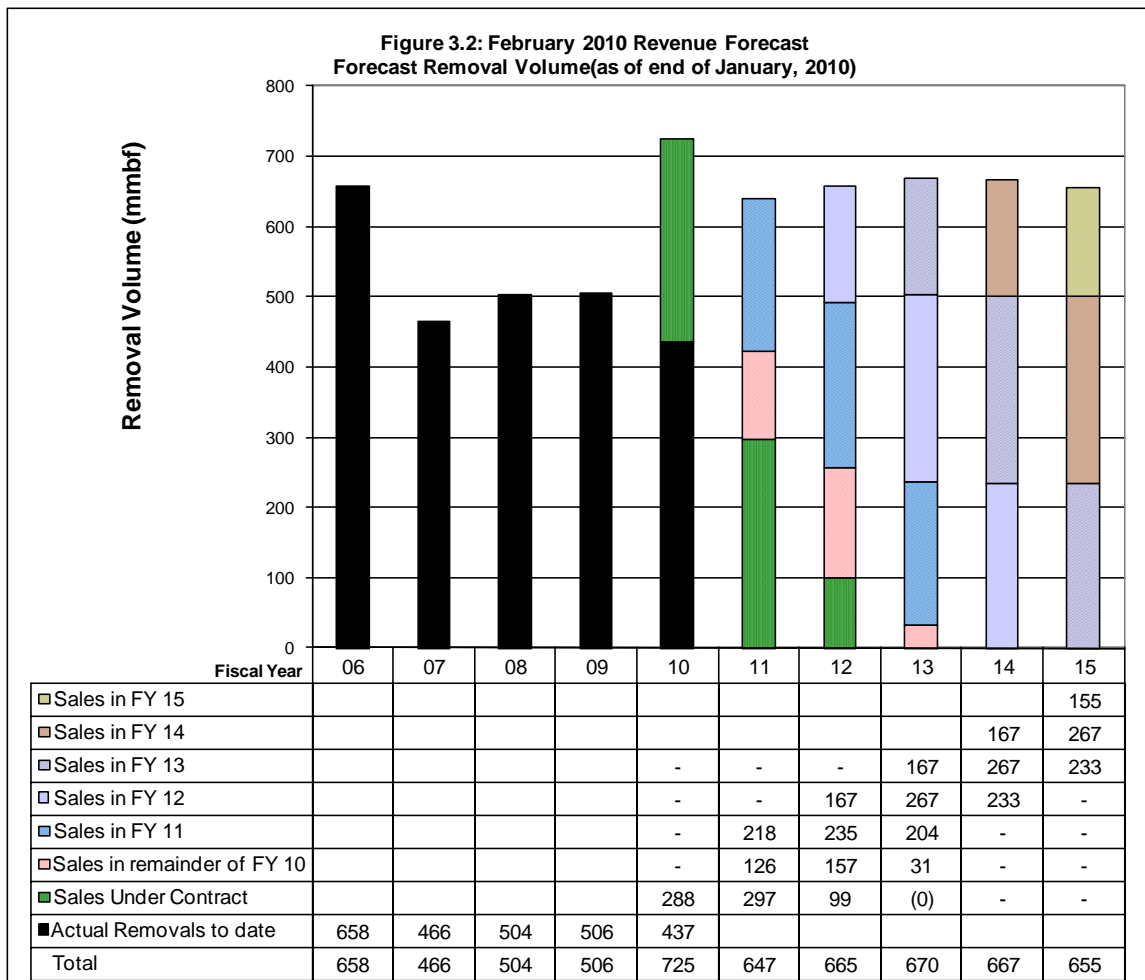
[http://www.dnr.wa.gov/BusinessPermits/Topics/TimberSaleAuction/Pages/psl\\_ts\\_auction\\_results.aspx](http://www.dnr.wa.gov/BusinessPermits/Topics/TimberSaleAuction/Pages/psl_ts_auction_results.aspx)



**Timber Removal Volume.** For each Forecast, we survey purchasers to determine their planned timing of removals from the volume they have under contract at the time of the survey.

The latest survey, conducted in the first week of January, indicates that purchasers increased their harvest plans for FY 2010. The department currently has 684 mmbf valued at \$152.8 million under contract. Purchasers plan to harvest 288 mmbf, 42 percent of the volume under contract this fiscal year (FY 2010), 297 mmbf (43 percent) next fiscal year, and the remaining 99 mmbf (15 percent) next biennium (2011-13). (See **Figure 3.2** for detail.)

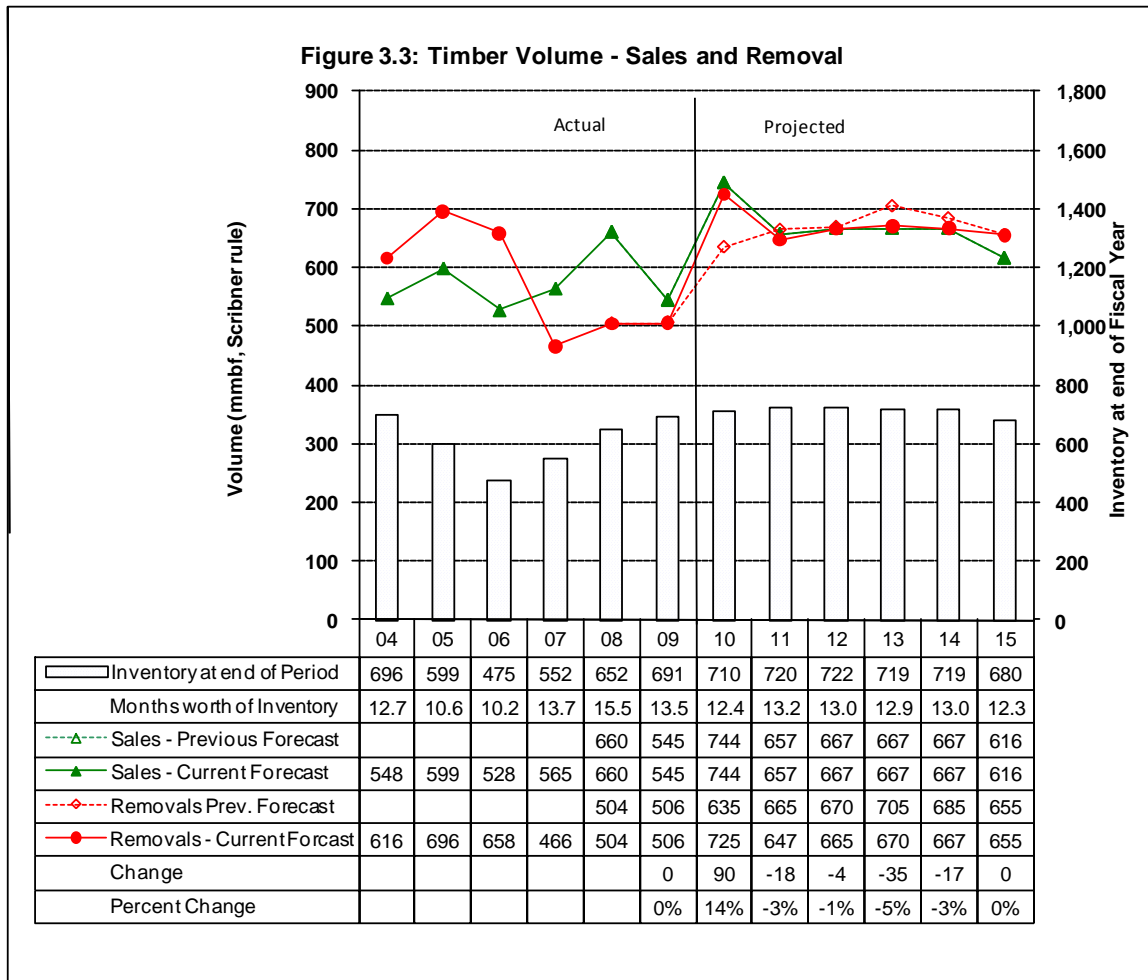
Through January (the first seven months of FY 2010), purchasers removed 437 mmbf, together with the expected removals of 288 mmbf from volume under contract which brings our forecast of total removals for FY 2010 to 725 mmbf. This is an increase of 90 mmbf, or 14 percent, from what we forecast for FY 2010.



**Removals in FY 2010 and Beyond.** Removals generally follow sales but not always. For the ten-year period from FY 1997 through FY 2006, removals were greater than sales in seven of the ten years and the volume under contract fell by more than half, from 1 billion board feet to just over 475 million board feet. During the FY 2004-2006 period, removals averaged 17 percent more than the sales level for those three years. Also during that period, the volume under contract decreased from 696 mmbf to 475 mmbf, and the months worth of inventory at the current harvest rate fell to just 10.2 months.

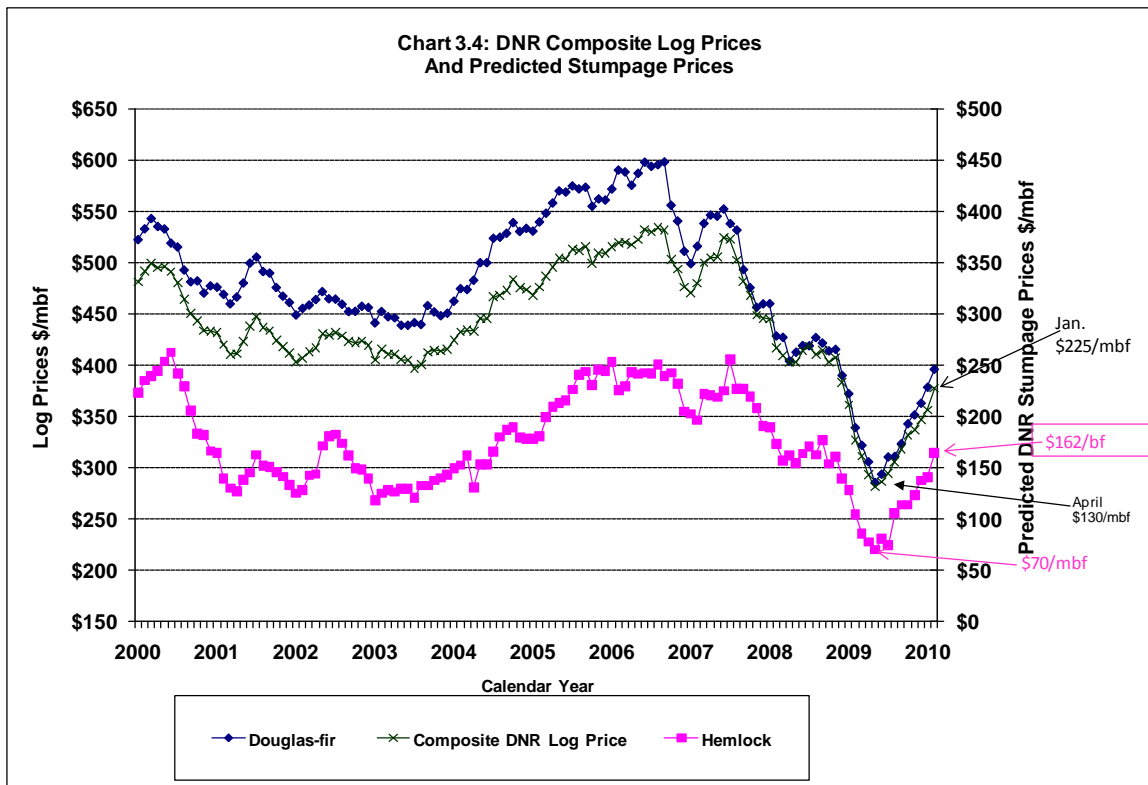
From FY 2007 to FY 2009 things turned around and removals were about 17 percent less than sales for that three-year period. During this period, the volume under contract grew from 475 mmbf to 691 mmbf and the months' worth increased from 10.2 months to 13.5 months worth.

Generally, we anticipate that purchasers will draw down the volume under contract during periods of increasing prices and add to the volume under contract when prices are falling.

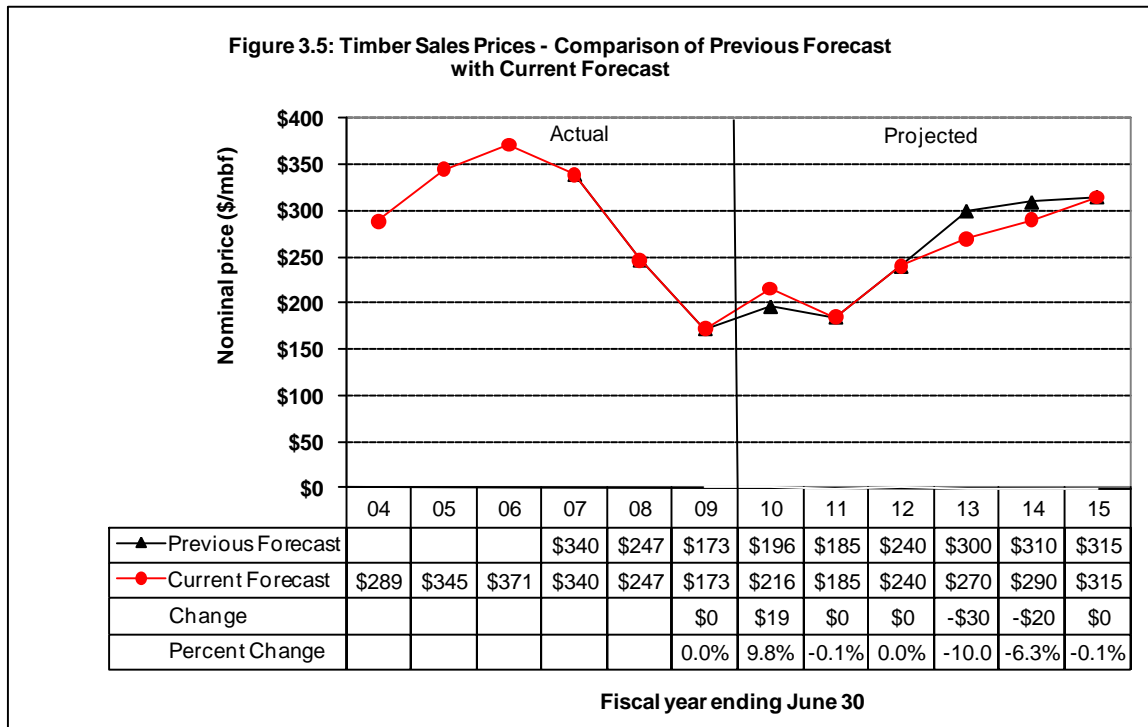


Going forward, even though we are forecasting prices to increase, we project that removals will be more or less equal to sales. (See **Figure 3.3** for details.)

**Timber Sales Prices.** When the November 2009 Forecast was published, log prices were at \$345/mbf and the corresponding projected DNR stumpage price was at \$195/mbf. Since then, log prices have increased, and now stand at \$375/mbf and the corresponding stumpage price is \$225/mbf, an increase of 15 percent. (See **Figure 3.4** for details on DNR composite log prices and projected DNR stumpage prices.)

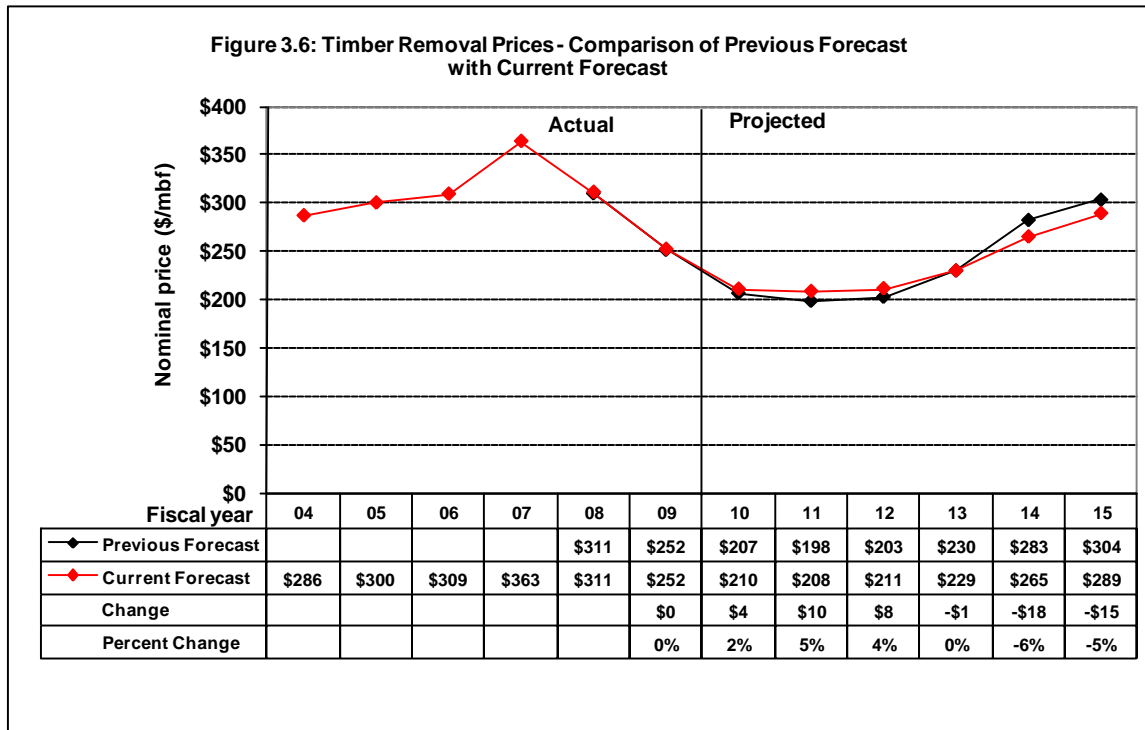


As we discussed above, we expect the current run up in log and stumpage prices over the last three months to be erased over the next three to six months. Based on this assumption, we have increased DNR stumpage prices by 9.8 percent to an average of \$216/mbf for all of FY 2010, and hold constant our Forecast for FY 2011 at \$185/mbf.



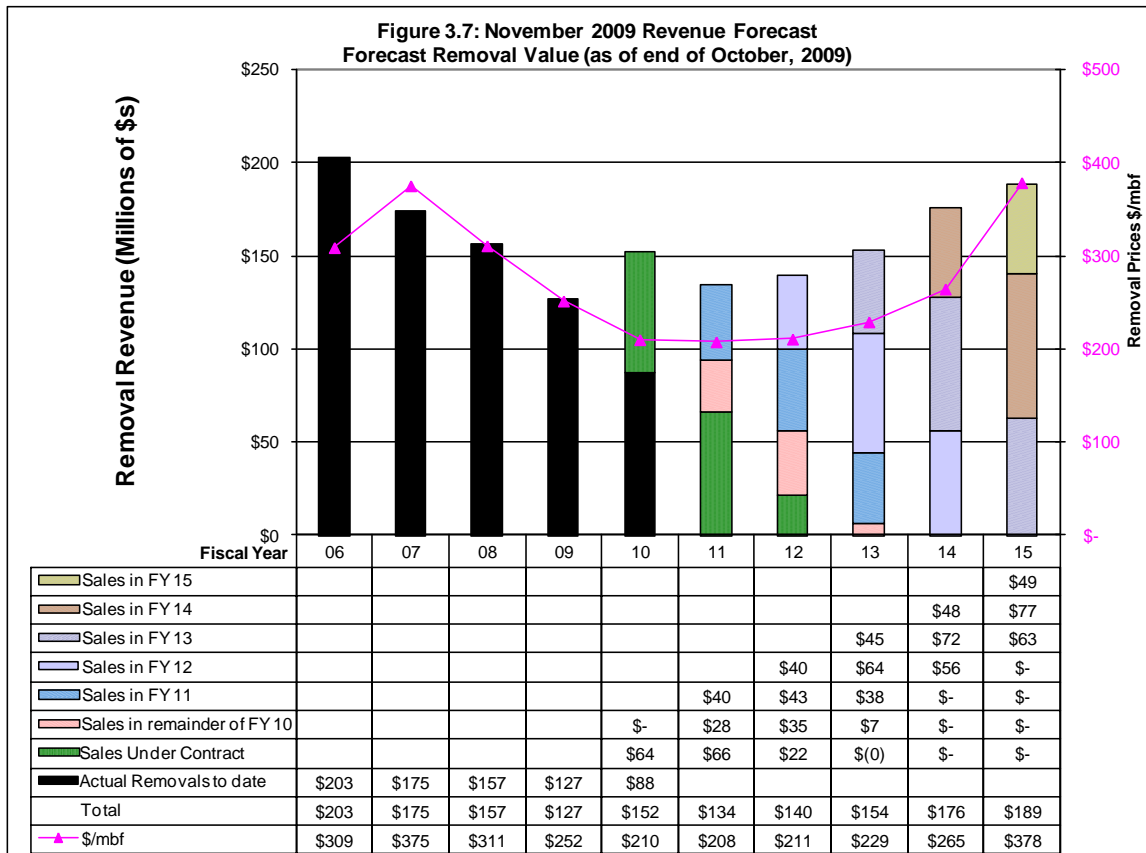
Market conditions are expected to improve significantly in FY 2012 and FY 2013 because of a bounce-back in the U.S. housing market, and continued growing world demand for lumber. As a result, DNR stumpage prices are forecasted to increase sharply in 2012 by over \$55/mbf or 30 percent. We now believe that sluggish demand, coupled with ample timber supply will keep our stumpage price lower than we previously projected. (See page 26 of this report **Timber Supply** for detail.) Based on this analysis, we have scaled back our forecast of price increases for the next two years (FY 2013 and FY 2014) by about half. (See **Figure 3.5** for details.)

**Timber Removal Prices.** Removal prices are a function of sales prices and removal timing. They can be thought of as a moving average of previous sales prices, weighted by the volume of sales removed from each previous sales period. The removal volumes used to calculate the weights are shown in **Figure 3.2**, which results in a smoothing out and a lag of removal prices compared to sales prices. For example, sales prices bottomed out at \$173/mbf in FY 2009. Removal prices aren't forecasted to bottom out until two years later in FY 2011 at \$208/mbf, \$35/mbf higher than the bottom for sales prices.



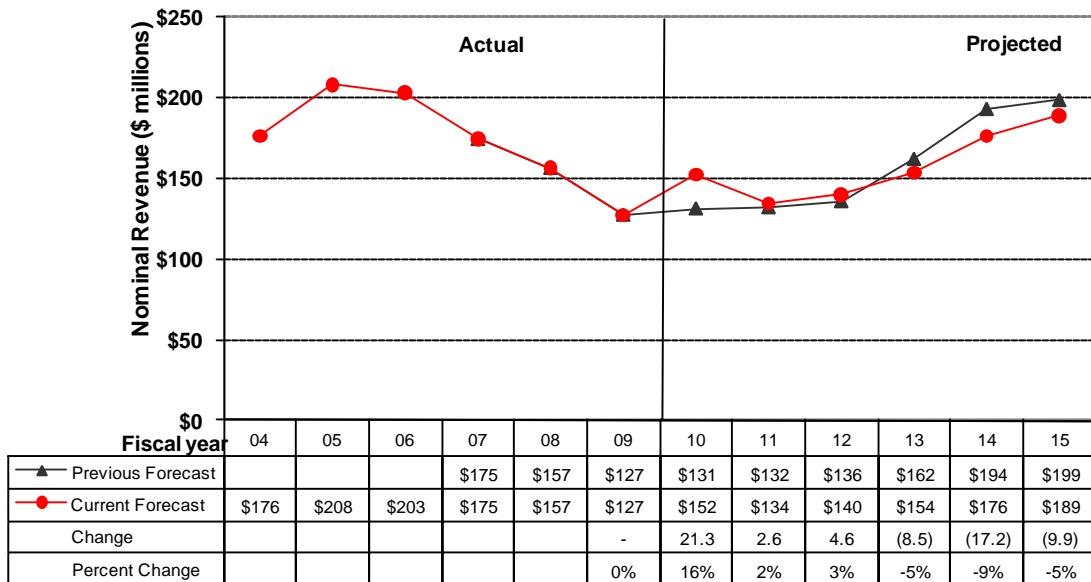
Forecast removal prices in FY 2011 are up by \$10/mbf, or about 5 percent, from that forecast in November, due to the high sales prices in FY 2010. Forecast average removal prices in FY 2012 are up \$8/mbf, or 4 percent, reflecting the increase in Forecast sales prices in FY 2010 (see **Figure 3.6** for details).

**Timber Removal Revenues.** Figure 3.7 shows removal revenues by the dates the timber was sold ('under contract' is already sold) and the average removal price for that fiscal year. Over 84 percent of the forecast harvest value this biennium (FY 2010 and FY 2011) will come from the volume sold before or under contract as of the end of January; 7 percent of the forecast harvest value is forecasted to come from sales sold in the remainder of this year (FY 2010); the remaining 9 percent will come from timber sales sold in FY 2011.



Forecast timber revenues are up by \$21.3 million (16 percent) in FY 2010 and \$2.6 million (2 percent) in FY 2011. In the 2011-13 Biennium, revenues are down by \$3.9 million, or 2 percent. See **Figure 3.10** for detail.

Figure 3.8: Timber Removal Revenues - Comparison of Previous Forecast with Current Forecast, 2000-2013



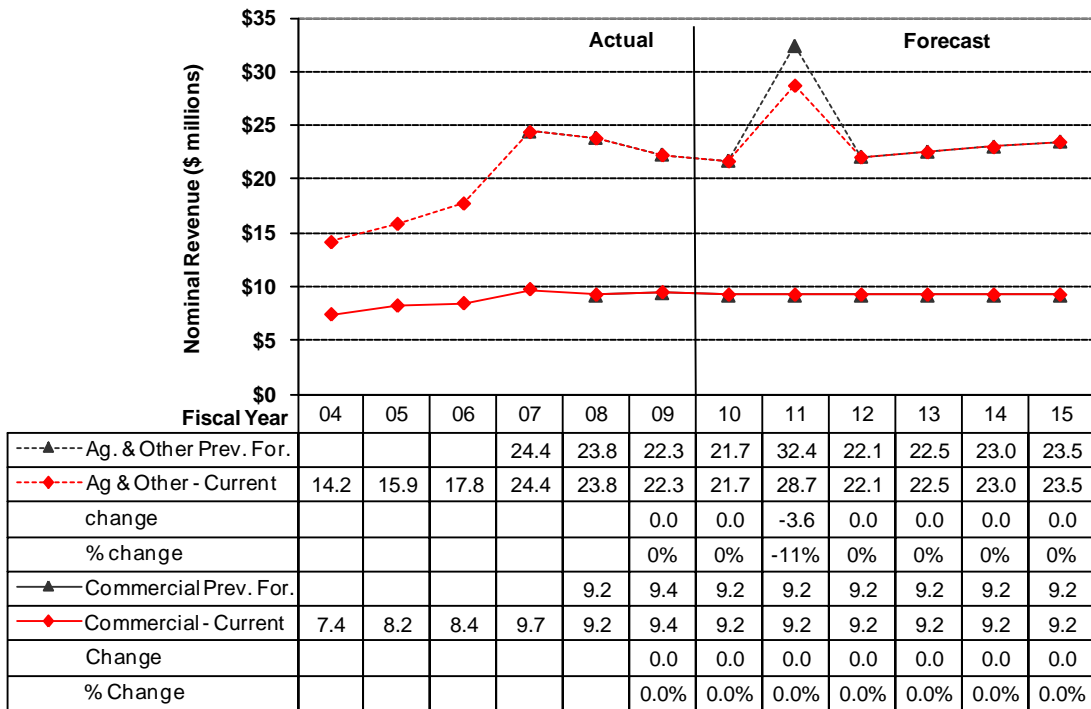
## Upland lease revenues

Upland lease revenues are generated primarily from leases and the sale of valuable materials, other than timber. In this Forecast, upland lease revenues are divided into two categories:

- 1) **Commercial** – Commercial real estate leases.
- 2) **Agricultural and Other** – Agricultural, special use, mineral and hydrocarbon, rights-of-way, communication sites, special forest products leases, and sale of other valuable materials.

**Commercial.** For the first half of FY 2010, actual collections of commercial lease revenue were \$147,000, or 3 percent more than forecast. While this is a positive indicator it likely is the result of the timing of revenues rather than an increase in revenues. The current economic slowdown has increased the probability that we could see some of our commercial building lessees go out of business and default. For now, we are leaving our forecast for future years unchanged, but we believe the risk of downside adjustment to our current forecast is probably greater than the upside risk.

**Figure 3.9: Upland Lease Revenue - Comparison of Previous Forecast with Current Forecast, 2000-2013**

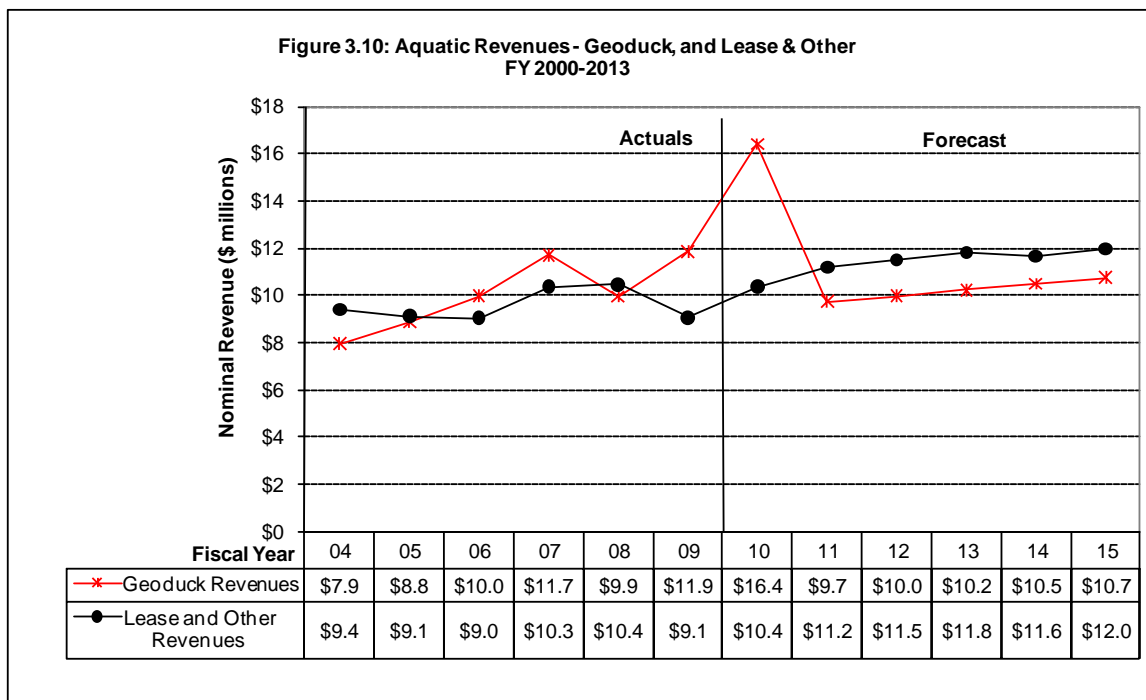


**Agricultural and Other.** Actual collections during the first half of FY 2010 were about \$140,000, or 1 percent, above what was forecast in November. At this point, we think there may be more downside than upside potential, so we are leaving revenues for FY 2010 unchanged from those forecast in November.

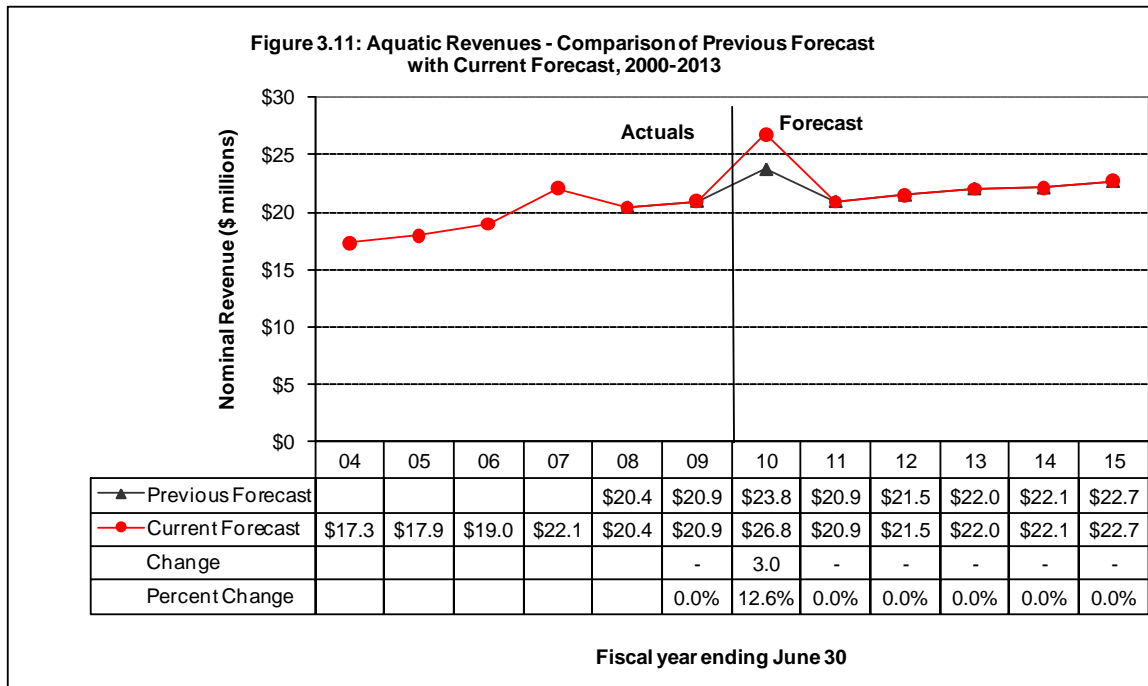
As described in the September 2009 Forecast, revenues in FY 2011 were expected to spike because of the one-time sale of communication site facilities in FY 2011. As the department has moved forward with that sale, the expected revenues have been reduced from \$10 million to \$7 million. In addition, the expected date of new agricultural property acquisition has been postponed, which reduces revenues in FY 2011 by an additional \$600,000 (See **Figure 3.9** for details.)

## Aquatic revenues

**Geoduck Revenues.** Since the November Forecast, the department had another very successful geoduck auction, averaging over \$10.50/lb., which is well over twice the forecast level. Despite continued higher-than-forecast geoduck prices, we are not changing our forecast of geoduck revenues in FY 2011 and beyond, since geoduck prices are highly volatile and likely will return to more normal levels at some point. Based on the year-to-date sales, forecast aquatic revenues are up by \$3.0 million for the current biennium.



**Lease and Other Revenues.** Lease and other aquatic revenues year-to-date through the first half of FY 2010 are \$375,000, or 7 percent above the November forecast. The increase could not be attributed to any specific type of lease. And we believe it may be due to the timing of collections rather than a sustainable increase, so we are not changing our forecast of lease and other aquatic revenues in FY 2010 and beyond at this time.

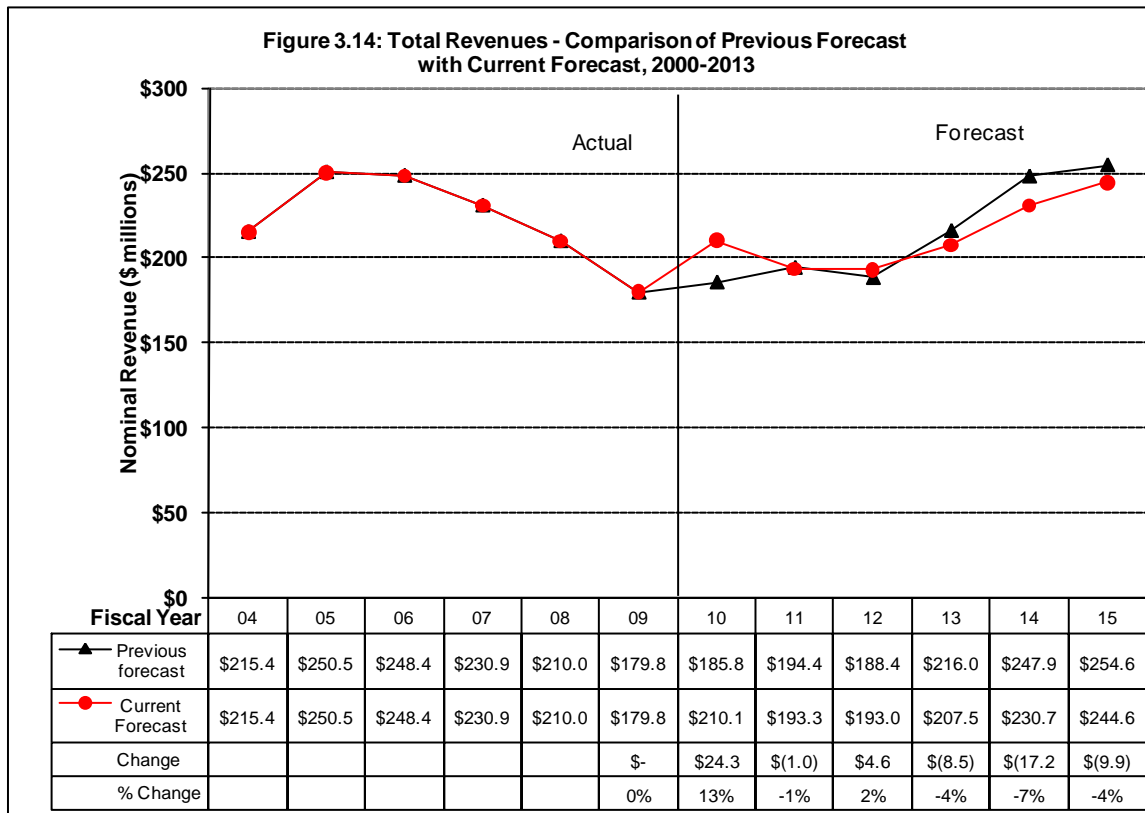


The net result is an increase in forecast revenues from aquatic lands by \$3.0 million in FY 2010 with no change for the remaining years (see **Figure 3.11** for detail).

## Total revenues from all sources

Revenues during the 2009-11 Biennium are up from previous Forecasts by \$23.3 million, or 6.2 percent. This is due primarily to increased timber revenues—up \$23.9 million—and increased geoduck revenues—up \$3.0 million. These increases were offset by a \$3.6 million reduction in other forecast lease revenues.

Revenues during the 2011-13 Biennium are down from previous Forecasts by \$3.9 million, or 1.0 percent. This reduction is the result of a reduction in timber revenues, which was primarily a shift in timber revenues out of the 2011-13 Biennium and into the current biennium. (See **Figure 3.14** for detail.)



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## Some caveats

DNR strives to produce the most accurate and objective forecast possible, based on the department's current policy directions and available information. Actual revenues will depend on future policy decisions made by the Legislature and the department, as well as market and other conditions beyond DNR's control. Listed below are issues that could potentially have a significant impact on future revenues from DNR-managed lands:

- **Housing Markets.** It has been almost four years since the housing downturn began. We believe the bottom was reached in the first half of CY 2009. Since then housing starts have bumped along the bottom. Recent housing data has not been encouraging and we have reduced our housing starts forecast once again. Still our forecast of housing starts may prove to be optimistic. It is possible that the housing recovery could be pushed back even further by a slower-than-expected economic recovery. This would likely result in lower timber sales prices than we currently forecast.
- **Timber Sales Volume.** This Forecast is based on the assumption that the department will sell 744 mmbf of regular timber sales in FY 2010, an increase of 55 percent over the FY 2009 level. While sales went well during the first seven months of the year, selling 744 mmbf remains an ambitious target especially if markets turn down during the next three to five months.
- **Defaults and Extensions.** Previous Forecasts have included a caveat regarding the possibility of defaults. At this point, most of the contracts of concern (due to their high sales prices relative to current prices) have been resolved or accounted for in the Forecast. DNR has managed to get through this with minimal damage and we expect no further downward adjustments to the Forecast because of unexpected defaults or extensions. This removes a large downside risk from the Forecast.

Over the past three months, log and stumpage prices have been higher than were forecast in November and purchasers have indicated they are going to accelerate harvest levels from the volume under contract. These two factors have boosted the current forecast over that made in November. But generally the housing market has continued to underperform, and we believe the higher stumpage prices are due to short-term supply and constraints coupled with a short-term surge in demand related to lumber and log inventory adjustments. We expect the mills to increase production over the next three or four months and adequate log supplies to flow from private lands. At this point we judge the downside risks and upside profits to our forecast to be about balanced. Naturally we worry more about the downside risks.

These and other future circumstances could have a great impact on future revenues. As events and market conditions develop, DNR will incorporate new information in future Forecast updates.

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## Distribution of revenues

The distribution of timber revenues by grant are based on:

- The value of timber in the inventory (sales sold but not yet harvested) ;
- Planned sales for the remainder of FY 2010 through FY 2012 based on planned sales volumes;
- The distribution of the sustainable harvest for FY 2013 through FY 2015.

Timber sales are expected to be harvested on average between 12.4 and 13.2 months after they are sold. (See **Figure 3.3** for details.) Distributions of lease revenues are assumed to be proportional to historic distributions unless otherwise specified.

Since a single timber sale can be worth over \$3 million, dropping, adding, or delaying even one sale can represent a significant shift in revenues to a specific trust fund.

**Management Fee Deduction.** The budget passed by the Legislature extended the 30 percent RMCA deduction through the end of the 2009-11 Biennium. The RMCA deduction is assumed to return to 25 percent in FY 2012. The forecast RMCA revenues at the 30 percent deduction for FY 2012 and beyond are shown at the top of **Table 3.2**.

## Revenue forecast tables

Tables 3.1 and 3.2 on the following pages provide Forecast details. **Table 3.1** focuses on the source of revenues, and **Table 3.2** focuses on the distribution of revenues. Both tables include historical and projected figures.

**Table 3.1 February 2010 Forecast by Source (In millions of dollars)**

Change from November 09 Forecast								
<b>Timber Sales</b>	<b>FY 08</b>	<b>FY 09</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY 12</b>	<b>FY 13</b>	<b>FY 14</b>	<b>FY 15</b>
Volume (mmbf)	660	545	744	657	667	667	667	616
Change	-	-	-	-	-	-	-	-
% Change	0%	0%	0%	0%	0%	0%	0%	0%
Price (\$/mbf)	\$247	\$173	\$216	\$185	\$240	\$270	\$290	\$315
Change	\$0	\$0	\$19	\$0	\$0	-\$30	-\$20	\$0
% Change	0%	0%	10%	0%	0%	-10%	-6%	0%
<b>Value of Timber Sales (In millions of dollars)</b>	<b>\$ 163.0</b>	<b>\$ 94.0</b>	<b>\$ 160.5</b>	<b>\$ 121.5</b>	<b>\$ 160.1</b>	<b>\$ 180.1</b>	<b>\$ 193.4</b>	<b>\$ 194.1</b>
Change	\$ -	\$ -	\$ 14.3	\$ (0.1)	\$ -	\$ (20.0)	\$ (13.0)	\$ (0.1)
% Change	0%	0%	10%	0%	0%	-10%	-6%	0%
<b>Timber Removals</b>	<b>FY 08</b>	<b>FY 09</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY 12</b>	<b>FY 13</b>	<b>FY 14</b>	<b>FY 15</b>
Volume (mmbf)	504	506	725	647	665	670	667	655
Change	-	-	90	(18)	(4)	(35)	(17)	0
% Change	0%	0%	14%	-3%	-1%	-5%	-3%	0%
Price (\$/mbf)	\$311	\$252	\$210	\$208	\$211	\$229	\$265	\$289
Change	\$0	\$0	\$4	\$10	\$8	-\$1	-\$18	-\$15
% Change	0%	0%	2%	5%	4%	0%	-6%	-5%
<b>Timber Revenue (In millions of dollars)</b>	<b>\$ 156.6</b>	<b>\$ 127.2</b>	<b>\$ 152.4</b>	<b>\$ 134.5</b>	<b>\$ 140.3</b>	<b>\$ 153.7</b>	<b>\$ 176.4</b>	<b>\$ 189.3</b>
Change	\$ -	\$ -	\$ 21.3	\$ 2.6	\$ 4.6	\$ (8.5)	\$ (17.2)	\$ (9.9)
% Change	0%	0%	16%	2%	3%	-5%	-9%	-5%
<b>Lease Revenue</b>	<b>FY 08</b>	<b>FY 09</b>	<b>FY 10</b>	<b>FY 11</b>	<b>FY 12</b>	<b>FY 13</b>	<b>FY 14</b>	<b>FY 15</b>
<b>Agricultural and Mineral</b>	<b>\$ 23.8</b>	<b>\$ 22.3</b>	<b>\$ 21.7</b>	<b>\$ 28.7</b>	<b>\$ 22.1</b>	<b>\$ 22.5</b>	<b>\$ 23.0</b>	<b>\$ 23.5</b>
Change	\$ -	\$ -	\$ -	\$ (3.6)	\$ -	\$ -	\$ -	\$ -
% Change	0%	0%	0%	-11%	0%	0%	0%	0%
<b>Commercial</b>	<b>\$ 9.2</b>	<b>\$ 9.4</b>	<b>\$ 9.2</b>	<b>\$ 9.2</b>	<b>\$ 9.2</b>	<b>\$ 9.2</b>	<b>\$ 9.2</b>	<b>\$ 9.2</b>
Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
% Change	0%	0%	0%	0%	0%	0%	0%	0%
<b>Aquatic Revenue</b>	<b>\$ 20.4</b>	<b>\$ 20.9</b>	<b>\$ 26.8</b>	<b>\$ 20.9</b>	<b>\$ 21.5</b>	<b>\$ 22.0</b>	<b>\$ 22.1</b>	<b>\$ 22.7</b>
Change	\$ -	\$ -	\$ 3.0	\$ -	\$ -	\$ -	\$ -	\$ -
% Change	0%	0%	13%	0%	0%	0%	0%	0%
<b>Total Lease Revenue</b>	<b>\$ 53.4</b>	<b>\$ 52.6</b>	<b>\$ 57.7</b>	<b>\$ 58.8</b>	<b>\$ 52.7</b>	<b>\$ 53.8</b>	<b>\$ 54.3</b>	<b>\$ 55.4</b>
Change	\$ -	\$ -	\$ 3.0	\$ (3.6)	\$ -	\$ -	\$ -	\$ -
% Change	0%	0%	5%	-6%	0%	0%	0%	0%
<b>Total All Sources</b>	<b>\$ 210.0</b>	<b>\$ 179.8</b>	<b>\$ 210.1</b>	<b>\$ 193.3</b>	<b>\$ 193.0</b>	<b>\$ 207.5</b>	<b>\$ 230.7</b>	<b>\$ 244.6</b>
Change	\$ -	\$ -	\$ 24.3	\$ (1.0)	\$ 4.6	\$ (8.5)	\$ (17.2)	\$ (9.9)
% Change	0%	0%	13%	-1%	2%	-4%	-7%	-4%
Note: Trust land transfer is not included in distribution revenues.								
This table excludes interest and Land Bank transactions, fire assessments, permits, and fees.								
Totals may not add due to rounding.								

**Table 3.2: February 2010 Forecast by Fund (In millions of dollars)**

Change from November 09 Forecast									
30% RMCA thru FY 11					RMCA AT 30%====>	\$ 30.1	\$ 33.3	\$ 37.3	\$ 38.7
Management Funds		FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
041	RMCA - Upland	\$ 32.0	\$ 26.5	\$ 28.5	\$ 28.5	\$ 25.1	\$ 27.7	\$ 31.1	\$ 32.3
	Change	\$ -	\$ -	\$ 2.0	\$ (0.6)	\$ 0.9	\$ (1.2)	\$ (2.3)	\$ (1.4)
	% Change	0%	0%	8%	-2%	4%	-4%	-7%	-4%
041	RMCA - Aquatic	\$ 8.6	\$ 8.9	\$ 11.8	\$ 8.8	\$ 9.1	\$ 9.3	\$ 9.3	\$ 9.5
	Change	\$ -	\$ -	\$ 1.5	\$ -	\$ -	\$ -	\$ -	\$ -
	% Change	0%	0%	15%	0%	0%	0%	0%	0%
014	FDA	\$ 18.6	\$ 17.3	\$ 21.7	\$ 20.1	\$ 18.0	\$ 18.9	\$ 21.4	\$ 24.2
	Change	\$ -	\$ -	\$ 3.4	\$ 0.1	\$ 0.3	\$ (0.9)	\$ (2.1)	\$ (1.0)
	% Change	0%	0%	19%	1%	2%	-4%	-9%	-4%
Total Management Funds		\$ 59.2	\$ 52.7	\$ 62.0	\$ 57.3	\$ 52.2	\$ 56.0	\$ 61.7	\$ 66.0
	Change	\$ -	\$ -	\$ 6.9	\$ (0.5)	\$ 1.3	\$ (2.1)	\$ (4.4)	\$ (2.4)
	% Change	0%	0%	13%	-1%	3%	-4%	-7%	-3%
Current Funds		FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
113	Common School Construction	\$ 56.6	\$ 41.5	\$ 45.1	\$ 47.6	\$ 54.5	\$ 58.8	\$ 65.7	\$ 67.6
	Change	\$ -	\$ -	\$ 3.3	\$ (1.4)	\$ 2.3	\$ (2.6)	\$ (4.2)	\$ (2.7)
	% Change	0%	0%	8%	-3%	4%	-4%	-6%	-4%
999	Forest Board Counties	\$ 52.5	\$ 48.6	\$ 57.6	\$ 50.4	\$ 47.0	\$ 49.1	\$ 55.5	\$ 60.6
	Change	\$ -	\$ -	\$ 9.0	\$ 1.4	\$ 0.6	\$ (2.4)	\$ (5.4)	\$ (2.9)
	% Change	0%	0%	19%	3%	1%	-5%	-9%	-5%
001	General Fund	\$ 3.0	\$ 1.4	\$ 3.3	\$ 3.7	\$ 2.8	\$ 2.6	\$ 2.9	\$ 3.3
	Change	\$ -	\$ -	\$ 0.8	\$ (0.1)	\$ (0.1)	\$ (0.1)	\$ (0.3)	\$ (0.1)
	% Change	0%	0%	31%	-3%	-3%	-3%	-9%	-4%
348	University Bond Retirement	\$ 2.3	\$ 3.4	\$ 1.8	\$ 0.7	\$ 0.9	\$ 1.5	\$ 1.8	\$ 2.1
	Change	\$ -	\$ -	\$ (0.1)	\$ 0.0	\$ 0.1	\$ (0.1)	\$ (0.1)	\$ (0.0)
	% Change	0%	0%	-4%	4%	14%	-4%	-8%	-1%
347	WSU Bond Retirement	\$ 1.2	\$ 1.6	\$ 1.1	\$ 1.2	\$ 1.2	\$ 1.2	\$ 1.3	\$ 1.3
	Change	\$ -	\$ -	\$ -	\$ (0.1)	\$ -	\$ -	\$ -	\$ -
	% Change	0%	0%	0%	-4%	0%	0%	0%	0%
042	CEP&RI	\$ 3.8	\$ 3.8	\$ 4.0	\$ 4.7	\$ 4.8	\$ 5.7	\$ 6.3	\$ 7.2
	Change	\$ -	\$ -	\$ (0.6)	\$ 0.4	\$ 0.4	\$ (0.1)	\$ (0.6)	\$ (0.3)
	% Change	0%	0%	-14%	9%	9%	-2%	-9%	-3%
036	Capitol Building Construction	\$ 5.2	\$ 5.7	\$ 7.5	\$ 6.2	\$ 6.5	\$ 7.0	\$ 8.0	\$ 8.1
	Change	\$ -	\$ -	\$ 0.7	\$ (0.0)	\$ 0.1	\$ (0.4)	\$ (0.8)	\$ (0.5)
	% Change	0%	0%	11%	0%	2%	-5%	-9%	-6%
061/3	Normal (CWU, EWU, WWU, TESC)	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1
	Change	\$ -	\$ -	\$ -	\$ (0.0)	\$ -	\$ -	\$ -	\$ -
	% Change	0%	0%	0%	-3%	0%	0%	0%	0%
Other Funds		\$ 0.2	\$ 0.4	\$ 0.1	\$ 0.0	\$ 0.0	\$ 0.3	\$ 0.3	\$ 0.5
	Change	\$ -	\$ -	\$ (0.0)	\$ 0.0	\$ 0.0	\$ (0.0)	\$ (0.1)	\$ (0.0)
	% Change	0%	0%	-1%	215%	798%	0%	-16%	0%
Total Current Funds		\$ 125.0	\$ 106.5	\$ 120.7	\$ 114.6	\$ 117.8	\$ 126.3	\$ 141.8	\$ 150.9
	Change	\$ -	\$ -	\$ 13.2	\$ 0.2	\$ 3.5	\$ (5.7)	\$ (11.5)	\$ (6.6)
	% Change	0%	0%	12%	0%	3%	-4%	-7%	-4%

**Table 3.2(Continued): February 2010 Forecast by Fund (In millions of dollars)**

Change from November 09 Forecast 30% RMCA thru FY 11									
<b>Aquatic lands Enhancement Account</b>		FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
<b>02R</b>		\$ 11.7	\$ 12.0	\$ 15.0	\$ 12.1	\$ 12.4	\$ 12.7	\$ 12.8	\$ 13.2
	Change	\$ -	\$ -	\$ 1.5	\$ -	\$ -	\$ -	\$ -	\$ -
	% Change	0%	0%	11%	0%	0%	0%	0%	0%
<b>Permanent Funds</b>		FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
601	Agricultural College Permanent	\$ 4.3	\$ 2.9	\$ 4.8	\$ 2.4	\$ 2.9	\$ 3.3	\$ 3.9	\$ 3.8
	Change	\$ -	\$ -	\$ 1.2	\$ (0.4)	\$ (0.1)	\$ (0.2)	\$ (0.3)	\$ (0.2)
	% Change	0%	0%	34%	-14%	-4%	-7%	-7%	-6%
604	Normal School Permanent	\$ 3.1	\$ 2.5	\$ 3.2	\$ 2.7	\$ 2.6	\$ 2.5	\$ 2.7	\$ 2.9
	Change	\$ -	\$ -	\$ 0.5	\$ 0.2	\$ (0.0)	\$ (0.1)	\$ (0.3)	\$ (0.2)
	% Change	0%	0%	21%	7%	0%	-4%	-10%	-6%
605	Common School Permanent	\$ 0.2	\$ 0.3	\$ 0.4	\$ 0.5	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.4
	Change	\$ -	\$ -	\$ -	\$ (0.1)	\$ -	\$ -	\$ -	\$ -
	% Change	0%	0%	0%	-11%	0%	0%	0%	0%
606	Scientific Permanent	\$ 6.0	\$ 2.8	\$ 3.8	\$ 3.2	\$ 4.4	\$ 6.0	\$ 6.9	\$ 7.1
	Change	\$ -	\$ -	\$ 0.9	\$ (0.5)	\$ (0.1)	\$ (0.4)	\$ (0.7)	\$ (0.5)
	% Change	0%	0%	32%	-15%	-1%	-6%	-9%	-6%
607	University Permanent	\$ 0.5	\$ 0.1	\$ 0.2	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.3
	Change	\$ -	\$ -	\$ 0.0	\$ 0.1	\$ 0.0	\$ (0.0)	\$ (0.0)	\$ (0.0)
	% Change	0%	0%	14%	20%	3%	-8%	-5%	-13%
<b>Total Permanent Funds</b>		\$ 14.1	\$ 8.6	\$ 12.5	\$ 9.3	\$ 10.6	\$ 12.5	\$ 14.4	\$ 14.6
	Change	\$ -	\$ -	\$ 2.7	\$ (0.8)	\$ (0.2)	\$ (0.7)	\$ (1.3)	\$ (0.9)
	% Change	0%	0%	28%	-8%	-1%	-6%	-9%	-6%
<b>Total All Funds</b>		FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
<b>Total</b>		\$ 210.0	\$ 179.8	\$ 210.1	\$ 193.3	\$ 193.0	\$ 207.5	\$ 230.7	\$ 244.6
	Change	\$ -	\$ -	\$ 24.3	\$ (1.0)	\$ 4.6	\$ (8.5)	\$ (17.2)	\$ (9.9)
	% Change	0%	0%	13%	-1%	2%	-4%	-7%	-4%
Note: Trust land transfer is not included in distribution revenues.									
This table excludes interest and Land Bank transactions, fire assessments, permits, and fees.									
Totals may not add due to rounding.									